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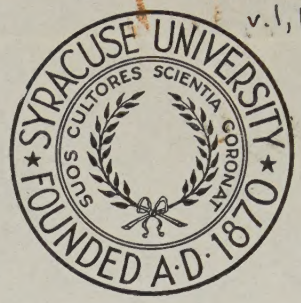

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THE JUNIOR COLLEGE CURRICULUM

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THE INSTITUTE FOR ADMINISTRATIVE OFFICERS
OF HIGHER INSTITUTIONS

Volume I

THE JUNIOR COLLEGE CURRICULUM

EDITED BY

WILLIAM S. GRAY

Dean of the College of Education
The University of Chicago

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PREFACE

The Institute for Administrative Officers of Higher Institutions was organized at the University of Chicago in 1927 for at least four purposes, namely, to provide a forum for the discussion of problems of common interest to administrative officers; to stimulate critical discussions of current tendencies in higher education; to present the results of experiments carried on in various institutions; and to stimulate additional studies of many perplexing problems in the field of higher education.

Although the Institutes of 1927 and 1928 were eminently successful, desirable changes soon suggested themselves. The first related to the nature of the Institute programs. Whereas at first a general program including discussions of many topics seemed desirable, the need of more intensive discussions of specific problems was soon apparent. Accordingly, the policy was adopted of concentrating attention during each Institute on a specific problem, such as the junior-college curriculum, the senior-college and graduate curriculum, college finance. The second demand related to the need of making the various papers and reports available for more thorough and deliberate study, both by those who attend the Institute and by all others who may be interested. As a result, arrangements were made to publish the *Proceedings of the Institute for 1929,* and, it is hoped, of subsequent Institutes.

Because of the recent rapid development of junior colleges in various parts of the country, the central theme for the Institute of 1929 was the "Junior-College Curriculum." The various papers reported in the chapters that follow appear in the order in which they were presented on the Institute program. They consider in turn the following significant issues: basic principles of curriculum construction; the general nature of curriculums in various types of junior colleges; vocational guidance in junior colleges and related curriculum problems; survey of orientation courses as exemplified by noteworthy courses in various institutions of the country;

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and reorganized and enriched junior-college courses in various departments for students who do not expect to specialize in those departments. Although this list of topics is by no means complete, it serves as a reasonably broad introduction to the problems of the junior-college curriculum which higher institutions face today.

The examples of curriculum tendencies reported in this volume supply clear evidence that fundamental changes are taking place in both the purpose and content of junior college instruction. They also reveal problems that challenge the best thinking of everyone interested in education at this important level.

WILLIAM S. GRAY

November 18, 1929

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CHAPTER I

ADAPTING THE CURRICULUM TO THE PSYCHOLOGICAL CHARACTERISTICS OF THE JUNIOR COLLEGE

CHARLES H. JUDD

As one reads accounts of the purposes and practices of junior colleges, one finds a number of statements which relate to the psychology of junior-college students. Three of these statements we shall consider in some detail. First, it is said that junior-college students are immature. Second, it is pointed out that the marked tendency in all junior colleges is to emphasize general preprofessional courses rather than courses intended for those who have reached the stage of specialization. Third, attention is called to frequent and apparently wasteful overlappings of the subject matters which are taught in high schools and junior colleges.

Obviously the first statement, that junior-college students are immature is an explicit description of psychological characteristics which must be taken into account in framing the curriculum. The curriculum must be such as to recognize immaturity, whatever that is, and to promote as far as possible the development of maturity. It remains for the student of the junior-college movement to discover the particular type or types of immaturity found in junior-college students.

The second statement, that junior-college courses are for the most part general, is psychological by implication rather than by direct assertion. If the practice of giving general courses at this level is defensible, there must be some reason why general courses are needed at the stage where students are about to enter upon the specializations which are provided by the senior college. We may formulate a number of questions. Is the immaturity of the junior-college student of such a character that general courses are better fitted to his mental development than specialized courses? What mental powers are trained by general courses that are not equally

well trained by special courses? What kind of general courses can best hold the interest of students?

The third statement, that there is much overlapping, is one about which many a heated argument has arisen. Not a few college teachers are prepared to justify all the overlapping which appears on the ground that high-school courses are superficial and inadequate and that the only sure foundations for college work are thorough and well-directed reviews covering the subject matters with which high-school courses deal ineffectively. High-school teachers and students, on the other hand, are often critical of the repetitious college courses, holding that they stifle enthusiasm and waste valuable time and energy. There are numerous psychological assertions which are exchanged by the disputants who approach this problem of overlapping from one side or the other. The psychologist who ventures to take a hand in the argument may find himself in a quarrel with both sides.

Before taking up the implication of the three statements regarding immaturity, emphasis on general courses, and overlapping, it is necessary to digress from psychology for a moment to call attention to the difficulty under which our discussion labors because the term "junior college" does not refer to the same type of situation from decade to decade. The Freshmen and Sophomores of a generation ago were younger, as Koos has shown, than are the Freshmen and Sophomores of today. High schools are offering many courses today which were formerly classified as college courses. If these trends persist, or others of equally radical character appear, the problems of the curriculum-maker will certainly be different twenty years from now from the problems of today, and the adjustment of the curriculum to the psychology of the junior-college student will involve considerations foreign to the present situation.

Any discussion of junior-college problems must, therefore, be prefaced by a frank recognition of the possibility that the present-day junior college may not last very long. It is altogether probable that our age is a transition age and that the educational organization which is even now beginning to appear on the horizon will re-

sult in a redefinition of the terms which we use in distinguishing the high school from the college.

Personally I am convinced that the readjustment of the junior-college curriculum in response to psychological demands means a far more fundamental change than that of a mere addition of new content to the curriculum, or a subtraction from the conventional content of the courses now offered in standardized institutions. If the junior-college curriculum undergoes the readjustments which are clearly indicated by present trends, the resulting change will involve, I believe, a reconstruction of the whole educational system. Let us return, however, from this digression to the topic assigned to this article.

Junior-college students are said to be immature. Certainly this does not mean that Freshmen and Sophomores are limited in the range of the intellectual contacts which they have enjoyed. Young people have never in the history of American education had broader training than they have today. The intellectual immaturity of junior-college students, which is generally recognized in educational writings, is relative to an ideal of achievement which lies beyond the first years of college. Junior-college students are immature, not because of meager experience, but because their contacts, however large, have not included the whole of modern complex civilization. The ranges of possible experience today are so much broader than were the ranges of possible experience a century ago that a youth of seventeen or eighteen years of age can compass only a small fraction of the experiences which are open to a member of his generation.

It is an interesting speculation to try to determine how far education is going to be able to solve the problem of introducing young people to civilization. There is no present indication that the complexity of life is going to be less in the future than it is now. Quite the contrary. Will young people of twenty and twenty-one be as far from compassing the experiences of their day a half-century from now as our young people of seventeen and eighteen are from being fully matured?

Let us seek further for details of meaning in the statement that junior-college students are immature. One manifestation of

immaturity which is often remarked upon is the fact that young collegians do not know how to use the freedom from restraint which they acquire by leaving home. It is argued that many junior colleges should be established so that there will be one near the home of each student in order that parents may exercise needed social control.

Here, again, one who sees junior-college students of today taking part in all kinds of independent social activities must recognize that it is only by contrast with their elders and because of their complex environment that they are thought to be immature. The uncouth social practices of the generation which hazed Freshmen passed away quite as much because college students have very generally developed superior social standards as because faculties passed regulations. The junior-college student of today is much more self-possessed and much more familiar with social conventions than was his grandfather or his father at the same age. Such social immaturities as junior-college students exhibit are real and vexing only in comparison with what one could wish for in a better regulated world.

It should be emphatically pointed out that the foregoing argument is not intended to disprove that junior-college students are immature. What is sought is a more detailed definition of the word immaturity. Junior-college students never were so experienced as they are today. They are immature only in the sense that the possibilities which lie before them have so expanded that they are comparatively far from complete initiation into all that education and life have to offer.

There is another aspect of the junior-college student's immaturity which is of very special importance to our discussion. Such a student is often lacking in methods of self-directed study. Much of our administrative machinery exhibits a general acceptance of this statement. Only upper-classmen in college are thought to be able to follow independent reading courses. Junior-college students are usually treated as dependent on constant guidance by class instructors. Upper-classmen in college are allowed great freedom in the choice of subjects. Junior-college students must take

required English and must attend gymnasium classes or military drill, and so on through a long list of restrictive routines.

It is a very interesting question to raise at this point: How far must our educational system assume responsibility for the real or supposed dependence of immature junior-college students on institutional guidance? How far is human nature accountable for the slow progress of young people in arriving at the stage of independent intellectual self-guidance? Is intellectual immaturity at seventeen years of age an inevitable consequence of slow development or is it an artifact of the schools?

Lack of maturity in methods of self-directed study is undoubtedly the most serious lack from which a student can suffer. We can overlook lack of information in an individual who knows how to secure information when he needs it. We can overlook social immaturity in an individual who understands how to analyze new environments into which he may be thrown. Immaturity which consists in lack of methods by means of which one analyzes situations and in lack of intellectual initiative is significant because it is the kind of immaturity which is likely to persist. Unless this kind of immaturity is overcome it means stagnation and intellectual helplessness. If junior-college students are immature in this sense, it is high time that colleges attack with vigor the problem of correcting the situation.

The impressive fact which must be introduced at this stage of our discussion is that the kind of immaturity which has just been described is not at all peculiar to junior-college students. Independent self-directed study is rare among senior-college students, and there is ground for the suspicion that the power of independent, self-directed study is not universal in the graduate school. These facts make it clear that students not only come to junior college intellectually dependent but they leave it in the same immature state. There is every reason to recognize immaturity in methods of self-directed thinking as one of the major deficiencies of college Freshmen.

Our analysis up to this point has given us some details with regard to junior-college immaturity. Junior-college students are in a complex world. With each new generation it becomes increasingly

difficult to come in contact with the manifold phases of an ever evolving civilization. Junior-college students are socially less mature than their elders but socially more mature than were their forebears at the same age. Junior-college students very generally do not possess the methods of intellectual attack on problems, which methods they should possess if they are to be independent in their intellectual developments.

The junior college with the co-operation of the other units of the educational system must develop, so far as possible, maturity in place of immaturity. The means which the junior college has available for this accomplishment are the instructional curriculum and such extra-curriculum activities as can appropriately be encouraged.

It was pointed out earlier that the curriculum which is commonly administered in the junior colleges of the country is made up of general courses. Specifically the conventional courses are English, foreign languages, mathematics, natural sciences, social sciences, and philosophy.

The indications which one gathers from a study of junior-college catalogues is that institutions, in making up their curriculums, are fully aware of the first two kinds of student immaturity which were described earlier, namely, immaturity of contact with the experiences offered by civilization and social immaturity. There is a valiant effort in junior colleges to give students contacts with all kinds of facts. One learns in junior college about foreign countries and foreign literatures; one learns the facts of science, and the names and histories of writers who have used one's vernacular. Contents of experiences are set before the student in lavish array, and he is urged to know as much about the world as he can possibly learn in the fleeting years of his student life. He is asked to acquire an enormous fund of information. In the meantime, he is encouraged to be convivial with his college mates. He is told that contacts with out-of-classroom activities are wholesome and desirable. The complex world is forced upon his attention. He is, so far at least, made aware of his immaturity, and he is told that he is to be saved from this immaturity by much reading and much listening. The junior college finds the entering student limited in the

range of his experiences and it sends him on into senior college with a very respectable addition to the fund of experiences which he brought to college.

To be sure, there is a vague feeling in the minds of junior-college teachers that all is not well with this program. The high school was just as eager as is the junior college to add to the pupil's experiences. The high school lays before the pupil, as does the junior college, a vast array of informing experiences. The old-fashioned high school used to teach twelve sets of facts, or twelve units, and was content after these twelve units to send the graduate to college to get more. Now twelve units are regarded as far too few in view of the complexity of the world. Even sixteen units are thought by some to be too few; eighteen units are no longer unusual. College teachers often regard this multiplication of courses, not as an effort to overcome immaturity, not as a form of effective co-operation with the college, but as a mistake in policy. They evidently feel that there is an immaturity of mind which is not overcome by mere quantitative enlargements of experience. In its effort to define the deficiency which it finds in students, the junior college usually attributes the immaturity of high-school graduates to poor methods of teaching in the lower schools. There is little disposition in higher institutions to accept the idea that the limitations of human nature may be the explanation of immaturity. The high school is held responsible. Its methods are criticized and its contributions to experience are thought to be much less than they should be, or they are thought to be of an undesirable type.

The criticism of the high school and of the immature student goes so far in the junior college that much repair work is undertaken. The junior college teaches history and chemistry and French and a great many other subjects over again, declaring that the knowledge acquired in the lower school is intolerably unsystematic and incomplete. One hears from junior-college teachers the statement that their courses, though seeming to be repetitions of earlier courses, are different in method from the high-school courses and much more illuminating in arrangement and content.

There can be very little doubt that many students gain much by repeating in the junior college the studies which they took in the

high school. A well-conducted review can be on occasion very advantageous. The learner is freed from attention to confusing details in any well-conducted review because he has most of the detailed facts in mind at the beginning of the review as he could not have had them at the beginning of the course. He can now devote his attention to the broader aspects of the subject; he can, and often does, grasp general principles. The learner, also, becomes conscious of methods of thinking which he only vaguely apprehended while he was busy with the facts which he tried to master in his first contact with the subject.

If junior-college teachers were clearly conscious of the duty of producing in their students that type of maturity which was described earlier as familiarity with methods of thought, as the power of independent self-directed study, one could accept with patience whatever reviewing and overlapping is found to be necessary. The fact is that too often the only type of immaturity which junior-college courses aim to correct is immaturity resulting from limited experience. There is a great deal of mere extension of experience in the junior college. Many students never learn that there are methods of thought which will make them independent. They mature in the sense that they see something of the world, but they do not mature in the sense of acquiring general forms of thought.

It is a familiar principle in psychology that the mind must first have content on which to operate. The content of thinking is the first center of attention. In the later stages of intellection contents are classified, that is, arranged in orderly sequences, and relations are discovered—relations which mere attention to contents did not reveal. The mature mind is able to compare and generalize. The mature mind rearranges the world and thus brings about a new order of things. The mature mind ultimately becomes conscious of the methods by which it operates in comparing and generalizing, and it perfects devices for critically checking its own operations. In short, the mature mind reaches a level where content of experience is far less important than the organizations imposed upon content by critical thinking.

Such a statement from psychology clearly defines the stages through which education must carry the student. The student

must be supplied with content for his thinking; this is the task of the early secondary-school period. He must then be led to undertake some simple comparisons and generalizations. After he has performed these simple applications of organizing intelligence to a complicated mass of experiences, he must be made aware of the proper methods of critical thinking. He must then be given more content and more opportunity to organize his experiences at a higher level of comparison and generalization, and so on, successively dealing with particular ideas and ever broadening generalizations.

Where does the junior college find its place in this psychological formula of successive concentrations on content and critical organization? The answer is, I believe, clear. The junior college is the institution which should mark the transition from emphasis on content to emphasis on organization. The junior college has a double function. It is the final institution to deal with general education, and it is also under obligation to use the last stages of general education in preparing the student to undertake critical, independent thinking. The student should pass out of the junior college matured by his training to the point where he is ready to enter the field of constructive thinking.

I have never been able to understand why junior-college teachers are so critical of the high school for not finishing the training of students, especially when an examination of the products of the junior colleges makes it so painfully obvious that only a small fraction of those who pass out of the higher institution are really mature. If college teachers had really analyzed the educational process, they would have discovered that control of methods of thinking is a high form of maturity and one that can be reached only after the individual has passed through preliminary stages of attention to detailed facts. It is certainly true that the high school sends to college relatively immature students. It is certainly true that the junior college must do what it can to correct this immaturity. Is it not rational for the junior college to build on the high school rather than vituperate it and then repeat what the high school did before its pupils graduated?

There will doubtless be more than one view with regard to the

best curriculum with which to perform the double function of completing general education and preparing for independent specialization. There are some who think of the elementary courses in particular subjects as the best means for training junior-college students. In such courses with a somewhat limited subject matter the student, it is said, can be brought into contact with methods of thought and study which it is hoped will initiate him into the methods of critical thinking in a special field.

The objection to this emphasis on the methods of thought peculiar to a single field is that the training in self-directed thinking is narrow. The student who is too early absorbed in a limited group of ideas may ultimately become expert in dealing with these ideas, but he will lack the advantages which might have been gained from the cultivation of breadth and variety of thinking. There are dangers in too early specialization which are no less serious than the dangers of superficiality resulting from the effort to cover too much ground.

The junior-college period of education is in a very real sense a crucial period. The rounding out of general education in such a way as to give the student a broad contact with civilization and at the same time to give him control of methods of thought can be accomplished only when the curriculum is carefully organized.

As contrasted with elementary courses in particular subjects, the new general survey or orientation courses seem to offer a promising solution of the junior-college problem. These survey courses are broad enough in content to give students what they need first of all, namely, contact with the best that civilization has to offer. They are also by their very breadth stimulating to thinking and likely to help the student to see general principles. They come at a stage in the individual's intellectual history when he is beginning to be aware of his methods of thought, and they furnish him with models which he can follow without becoming slavishly subject to the mere routine of the teacher's mode of presentation.

The general survey courses seem to have developed in direct response to a need for a new type of educational procedure. These courses are not mere barren repetitions in the college of what has been studied in the high school. By surveying a wide range of

knowledge they extend the student's contacts and by their critical treatment of methods in the different fields, they give training in critical thinking. If those who formulate these courses can be led to see that they are opportunities for intellectual emancipation of the student just at the period when he is ready to take on the methods of independent self-directed study, great gain will come.

General survey courses still encounter certain obstacles which result from the mature habits of thought of specialists in particular fields. It is difficult to induce these specialists to participate in the preparation of a general curriculum, but the movement is under way and is one of the most promising innovations which has appeared for generations in American colleges.

It is not the function of this article to undertake a critical examination of the individual general survey courses. There is one general aspect of the matter, however, which may properly be made a subject of comment. There is much evidence that schools have in the past underestimated the ability of young students to develop power of independent thinking. So much effort has been expended in adding to the student's stock of experiences that the other ends of education have been too often overlooked. Students of high-school age can, if properly trained, reach intellectural maturity much earlier than is now common.

Considerations of this kind lead many of us to believe that ultimately the functions which the foregoing paragraphs have assigned to the junior college will some day be performed as a part of secondary education. Perhaps it is better not to urge the immediate articulation of the junior college with the high school but to allow the junior college to continue to develop in various different relations. After all, the evolution of educational organization will sooner or later result in the proper location of the final stages of general education. The only advantage in attempting to forecast the form of organization which evolution is going to produce is that we may, if we are wise in our forecast, save American education from a few years of inco-ordination and petty conflicts. At the risk of irritating repetition, I may say that I am sure we should seriously consider the fact that as matters are today good high schools are giving better training than do poor colleges. Some senior colleges

are in reality doing junior-college work. There is much mutual recrimination and useless overlapping. Many college teachers, instead of taking full advantage of what the high schools are doing and instead of making a thorough analysis of what they mean when they say that high-school graduates are immature, give courses which do not carry students one whit farther in critical thinking than did the courses of the high school.

If, in the midst of this chaos, it were possible for a group of trained administrators to sit down for a long enough period to canvass the whole educational program from primary grades to university, most of the present uncertainties could, I believe, be cleared away. The trouble with the present situation is that college administrators do not know what is going on in the lower schools, and teachers in the lower schools do not know that the college has made any advances since the Colonial period. There is probably not one college administrator in ten who realizes the importance of the fact that elementary education is being completed in many of the better schools from one to two years earlier than formerly. Conversely, there are a great many high-school teachers who are conducting recitations on lessons learned in the most formal way in an age when thinking rather than rote memory is at a premium.

The true function of the junior college and of every other unit in the educational system is to take pupils at a certain stage of immaturity, which is determined by their own natures and by their antecedent training, and sympathetically and intelligently to contribute to the processes of progressive maturing of these students. The junior college is only one factor in a continuous scheme of education. We can define its functions fully and finally only when we understand the scheme as a whole.

The plea of this article is, therefore, a plea for a new and unbiased study of the stages of mental development. There is a definite view with regard to these stages offered in this article, but it is not offered as a dogmatic solution of our problems; it is offered in the spirit of supplying a basis for discussion. In this spirit and in order that the study of the situation may be encouraged by the presentation of a series of concrete statements, the article has attempted to show that the junior college is the final stage of general educa-

tion wherever that final stage is located, and also that it should be the institution which sends out its products with the guaranty that they have come into more or less conscious control of methods of critical thinking.

By way of summary it may be pointed out that the method of this article is to take from the literature of education certain definite statements and certain evidences of existing practices, and to seek a detailed understanding of the psychological meaning of what is thus found. It is found that there is general agreement that junior-college students are immature. Analysis shows that the immaturity of junior-college students results in part from a lack of broad contacts with the experiences offered by civilization and by social life. More important, however, is the fact that junior-college students are deficient in methods of self-directed, independent study. The second conclusion which the article defends is that the courses which are common in junior colleges are often too completely devoted to enlarging the contents of experience, and not sufficiently explicit in their teachings of advanced methods of thought. Finally, the article indicated briefly the promising character of the new general survey courses which serve admirably the double purpose of completing general education and preparing the student in a broad way for independent thinking.

It may be appropriate in closing to reiterate the conviction of the writer of this article that a clearer conception of the relations of the various units of the American educational system would result in a marked reduction of the waste which now results from mutual suspicion and lack of co-operation among educational institutions. The junior college is certainly in process of reconstruction. Is its new form to be another exhibition of blind experimentation confused and inhibited by personal prejudices and short-sighted insistence on traditions or institutional interests, or is this new form to be the product of co-operative intelligence? I believe it is the function of such conferences as this to furnish the proper answer to these questions.

CHAPTER II

ARE THERE GENERAL PRINCIPLES THAT GOVERN JUNIOR-COLLEGE CURRICULUM?

FRANKLIN BOBBITT

Where labors are complex, one needs the guidance of clearly formulated science. In medicine or engineering, for example, when a task is to be rightly done, it must be guided by the appropriate medical or engineering science. In education likewise, since it is a work of the greatest complexity and uncertainty, every step should be guided by educational science. Of all of the aspects of education, curriculum-planning is the most complicated, since it is a planning of the entire educative process. It is futile to expect such work to be rightly done except as it is guided by basic principles of educational science, which have been definitely formulated, and of which the workers are fully conscious.

During recent years an enormous amount of work has been expended in attempts to improve and even to reformulate the curriculum of general education. National committees, one after the other, have deliberated and reported. The Department of Superintendence of the National Education Association recently devoted five years of research to the curriculum. The North Central Association has long been at work upon the problem. Hundreds of city school systems are literally expending millions of dollars upon labor in reformulating their curriculums. National foundations have been generously supporting phases of curriculum research.

And yet the results of this gigantic labor have been disappointing. Here and there, they have made some advance, and have improved details. They aid in formulating syllabi that are vastly more voluminous than those of former days and look very impressive. But after all, it is little more than a dressing up of old things in new styles. Of fundamental changes, there are few. Of fundamental improvement, there is little.

With a few exceptions, some of which I notice on the program of this conference, curriculum research has not yet recognized its problems. It has not found them, much less solved them. It has not yet even acceptably defined the term *curriculum*. It has not yet made clear the substance of the educative process that is to be programmed in the curriculum. It has not formulated the general principles of educational science which should guide judgment in arranging the details. And what is more, for the most part, it is not yet willing even to consider most of the problems in a dispassionate and genuinely scientific way. Its thought is conditioned by practices, inherited assumptions, and the demands of a mechanical type of administration. Its science is mainly a rationalizing of the existing system. It uses certain elements of scientific method, it is true. But it *assumes* the general substance of the curriculum prior to organizing its scientific procedures. The latter are then merely for working out details in harmony with a priori assumptions. Except for a few instances, curriculum research in general education has not been willing to clear the field completely of all inherited assumptions and to employ unhampered scientific method.

And so we raise the question whether the time has yet come for a genuine consideration of the possibility of general educational principles for the guidance of curriculum-making. We believe that it is the culminating level of general education, namely, the junior college, that should provide leadership in this matter for all of general education. We believe that if the junior college can achieve its intellectual freedom here and formulate the general principles, then the lower levels of general education in high school, junior high school, and elementary school will have their proper leadership and guidance for their portion of this same general education. We believe that the failure of the college properly to take the lead in this matter has been a major obstacle to proper curriculum-making upon the lower levels of general education.

Let us note some of the problems that must be considered if such principles are to be formulated.

I. What should the general education of the individual seek to accomplish? What results should it produce? The most important information for the guidance of labor of any kind is a knowledge of

what is to be produced. For general education, this is indispensable. Yet it has never been scientifically determined.

We can tentatively formulate the principle governing the objective of general education in a variety of ways. Let us state it in three different ways:

1. General education should store away securely in the memory organized bodies of proved information. The well-educated person is one with a well-stocked memory. In his aesthetic habits he may be a primitive; socially, he may be a barbarian; morally, a reprobate; as a citizen, he may be entirely inactive; his health may be broken, and his physical habits most ill-advised. But all these things are quite beside the point. He is well-educated if in his memory there reposes securely a verbally embalmed result of sixteen units of high-school subject matter and 120 hours of college subject matter.

2. General education should discipline the mind so that it may become skilful in discovering, organizing, and expressing that kind of information that is considered within academic walls. It matters little what subjects are mastered so long as one goes far enough to get the discipline. For accomplishing this purpose he will major intensively in some one department. It does not matter what department. He may minor in a closely related department or two, so that in both technique and in information, even in his so-called general education, he is intensively specialized.

3. General education should prepare one for current and continuous high-grade civilized living. In large part at least the race has discovered those ways of human living that are most wholesome, most fruitful, and in the long run most satisfying. To be civilized is to live in these ways. To be cultivated or cultured is to live in these ways. To be successful demands that one live in civilized ways. To be a good citizen and to help make democracy a success, one must pursue the ways of civilized living. Most completely to realize the opportunities and ends of one's seventy-year existence, one must follow the ways every year of his life that have been proved best. The well-educated person is one who has achieved the level of high-grade civilized living which is appropriate to his age, nature, and situation, and who holds to it consistently in all of

his current behavior. He may have so completely forgotten his textbook information that he could not pass even the easiest college entrance examination. He may have sloughed off the academic techniques of the schools. And yet even in this intellectual condition, if his current living is a mosaic of diversified activities on a properly elevated level, he is well-educated.

By current living we mean everything, both objective and subjective, that a person does. We mean his current subjective life as fully as his current objective activities. The term is to include those current intellectual activities which in every person are going on about fifteen hours each day, and which for the average person are so greatly in need of improvement. Then there are the emotional aspects of one's life, which are going on all the time, and which are also in need of being guided into civilized channels. There are also the aesthetic aspects, the social activities, one's expression, one's health activities, one's unspecialized practical labors, one's citizenship activities, one's recreations, and, as maturity is reached, one's daily work. If high-grade civilized behavior is to be the goal of junior-college education, all of these things are involved in a balanced way.

We have now stated the first guiding principle for the curriculum-maker in three different ways. It is not a matter of indifference which form of statement is chosen for practical guidance. If one chooses the first, the curriculum will be irrelevant, textbook lesson-learning, with little regard to anything outside the academic atmosphere. It will not be really preparation for human life as this should actually be lived. If one chooses the second statement of the principle, the curriculum likewise will look to an academic world to the relative neglect of the general world. One becomes a specialist in academic matters. Even more, he becomes a specialist in one particular portion of the academic field. He is not trained for his diversified behavior in an active world of current affairs. If one chooses the third statement of the principle, then the educative process is necessarily current *practice of the activities* of wholesome living. It becomes a doing of the things currently in which one is to grow ever more proficient. It is doing those things within normal situations as opportunities present themselves. It is con-

trolled practice of human living, twenty-four hours a day, 168 hours a week, and approximately 9,000 hours a year. It is wholesome living for the sake of living, and because this kind of living has been proved best. It is holding to the best ways, not because they are prescribed, but because they are seen to be, and known to be, best. A feature of this current living, then, must be current understanding of the relative values of civilized activities as compared with the crude primitive ways. This watchful and careful current living *is* the fundamental curriculum. It is not academic, though some of it will be in schools, and the school is concerned with influencing and guiding the whole of it, during the years of growth. We call it *practice,* but it is not of the spirit of academic drill; though there are details in which there must be certain mechanical drill. Most information needed for guiding the activities will be secured as a by-product of current intellectual living, though occasionally facts must be consciously mastered for definite guidance purposes.

In addition to the three statements of the principles governing objectives, as already stated, doubtless others can be suggested. The practical problem is which of the number is the one that the junior college accepts for its guidance. We believe the time has come when decision should be made. We believe that the principles needed for guidance should be definitely formulated. We believe that the actually controlling but generally unformulated assumptions represent in large part a prescientific stage of educational thinking; that the time has come when guidance should be, not by intellectual habits in which the controls are relatively unconscious, but rather by consciously and definitely accepted guiding principles.

We believe it better to be guided by wrong principles which are clearly and definitely conceived than by wrong principles of which one, because of habit, is unconscious. If he is clearly conscious of the principles, he will in time discover his error; but if he has not formulated them, then he cannot be critical of them. His error is relatively fixed.

We have referred to the enormous amount of effort being exerted nowadays in attempted reformulations of the curriculum, but

which is so largely fruitless. In spite of honesty, zeal, and industry, it has thus far accomplished little beyond changing the forms and trappings of things. And the reason? It seems to me the reason is that curriculum-makers have not sufficiently intellectualized the factors; they have not made themselves specifically conscious of the factors; they have not made their guiding assumptions conscious; they have not clearly visualized the basic errors that need to be corrected; they have not definitely formulated the principles that should guide them out of their errors.

And so, after a good many years of practical experience, it seems that the thing most needed all along the line, on the junior-college level among the rest, is a clearly conscious formulation of the principles that will provide guidance. Of course they ought to be scientifically established. But the inherited assumptions, in the form of mental habits, which we now so largely obey, were not scientifically established. If those we set up for our immediate guidance lack full scientific validation, they will be at least as well supported as the inherited ones. But they will possess two distinct advantages: (1) they will have been formulated by a profession which is intellectually nearer to adulthood than was that profession which crystallized the inherited principles; and (2) when once fully conscious of them, we can be critical of them, find their flaws, and gradually hammer them into shape. In other words, they will at first be upon the level of hypothesis. Practical experience and further research can gradually validate the hypotheses, modifying them as necessary, or even supplanting them, if practice proves them false. But we would say that it is better to be wrong with hypotheses of which one is conscious and critical than to be wrong with inherited hypotheses which are so grounded in habit that one is not critical.

II. For what period of life should the junior college prepare? According to the subject-storage conception, the subjects are laid away in the vaults of memory for use in future years. To the student who is mastering them and, in the main, to the teacher who is teaching them, there is little or no thought of current use. They are being stored for the future.

According to the disciplinary conception, they are largely

"preparation for college." The discipline, along with certain information, is being accumulated not for current living but for the future.

According to the conception of education for and by means of behavior, education will look primarily to *current* behavior. The individual is expected to hold high the entire seventy-year continuum of human behavior and not merely the adult portion of it. The four or five hours in school each day are to help him hold all of his activities to a proper level during the other twenty hours of the day while outside of school. The twenty-five or thirty hours in school a week are to assist him to hold to high-grade living during the 140 hours a week while he is out of school. Education at all times is preparation for the life that is actually going on. But this does not neglect the needs of the later adult level. This we can show by means of an illustration. In the case of the child in the elementary school, his physical health education aims, let us say, at right current physical living. Day by day and month after month, he manages his food activities, his sleep, the ventilation of his room, his personal cleanliness, his daily exercise, his watchfulness against infection, etc., as current living. The function of the elementary school is to see to it that he is proficient for six years in these current activities. The process then continues, let us say, through six years of the high school and another two years of the junior college. This means fourteen years of current performance of health activities, influenced, guided, and supervised by the school. So to live for fourteen years would, through long practice, fix the guiding information, habits, the physical tastes, the appreciations, and in all ways project him forward on a high level of physical living through his adult years. He would be prepared actually and not merely in a verbal and pretended way. This aiming at right current behavior through long years will train for continuity of the same kind of behavior during adult years. It is probable that nothing else will do so.

Training for current living, then, trains for continuity of activities through long practice of those activities. Note that the subject-storage conception assumes that it trains for activities also—of later years; but it is distant adult activities; they are nonexistent

at the time. The student gets no practice at the time. They are activities which are to begin years after the information is stored. But they may never begin. If they do, one may find that his stored subjects are not there; or that they are obsolete. In either case he has no genuine practice in the activities in which he needs to become skilful; and no way has yet been discovered—literally no way whatsoever—to become skilful in an activity without a practice of that activity.

For this problem we believe that the junior college should agree upon a statement of the guiding principle. Four possible forms of statement to be considered are the following:

1. In its curriculum the junior college will look only to the later college and university work.

2. The junior college will give the information and academic discipline that are to function during adult life subsequent to college years.

3. The junior college will prepare a balanced program that will give the information and the academic discipline needful both for later college work and for later adult years.

4. The junior college will assist its students to a continuity of current, diversified, and elevated human living, with the expectation that the continuity once set into operation will continue into and through the later adult years.

The curriculum-maker is not properly prepared to proceed until he has decided which of these four statements of principle is to provide him with guidance. It will make an enormous difference both to his work and to the administration of the curriculum whether he be guided by number 4, or by one of the others. If he rejects the fourth and chooses one of the first three, it will make a quite considerable difference in the program which one of the three is chosen. The easier way is not to consider and not to choose, but simply to be ruled by academic habit. It is the prescientific way. It is the easy method of drift and opportunism and the following of the academic fashions. It is a method which soon, we hope, will become obsolete, as the profession makes educational science the directing influence in all professional management.

III. On the junior-college level, what means are to be employed for discovering the quality and amount of one's education? We cannot administer education without having some method of evaluating the results. This method of evaluation is exceedingly potent in shaping the curriculum. Let us state alternative principles governing evaluation.

1. Carefully planned written and oral examinations, including possibly certain standardized tests, can provide the evidence of the quality and adequacy of one's general education.

2. The way one does one's academic work, the character of one's written papers and of one's participation in class discussion and in seminars, together with a certain amount of examination, will show the quality of one's education.

3. The way one lives from hour to hour and from day to day shows the degree in which one has attained the diverse activities and the elevated levels of civilized living, and thereby shows the quality and adequacy of one's education. Note is to be taken of the way he lives intellectually, what he reads currently, what he observes, what he discusses, and the general character of his thinking. Likewise notice should be taken of his citizenship and other social activities, his recreation, his health activities, his unspecialized practical labors, his expression, oral and written, and whatever else makes up human life. Every phase of the way he lives, whether subjective or objective, is to be taken into account.

Now which of these three possible principles governing valuation is to be employed? If the first is to be used, the curriculum will be of the textbook subject-mastery type; if the second, it will be subject mastery in part, and in part also mastery of the power to discover, organize, and verbally to interpret academic material; if the third, the curriculum will be composed of guided and conditioned practice in approved human living, which is continually being widened and elevated. If a primitive principle of evaluation is adopted, a primitive type of curriculum is enforced. If an advanced principle of evaluation is employed, it tends automatically to enforce an advanced curriculum. At present the plan of evaluation is one of the strongest shackles on the curriculum.

IV. How much continuity should there be in the curriculum of general education? The junior college is concerned with the culminating level of a general education, schooling for which begins in the kindergarten. Is the junior college to find all the things that have been going on in the development of children and youths for twelve years, and then to provide the finishing portion, the capstones of the entire educative process? Or may it formulate its program without particular regard to continuity of the experiences?

If it accepts the subject-teaching program, this plan will usually result quite automatically in discontinuity. What has been sufficiently stored in the elementary school is not to be continued in the high school. That work is finished. Arithmetic and geography, grammar and hygiene, and the like are stored. The process is complete. The high school can go on to other things. On the high-school level he can master his sixteen units of English, mathematics, and language; and then go on to the junior college and specialize, if he likes, in natural science and the social studies. The plan does not call for continuity of experience. French, for example, may be mastered in ninth or tenth grade of the high school and never be looked at again, or used, in either high school or junior college. In such a case the junior college is not providing the capstone of general education in French. Similar statements may be made with regard to algebra. It is finished and shelved in the ninth or tenth grade. The experience is then ended. Except for a few, the junior college provides no continuation of the algebraic experience. There is no need to do so since it is stored. That done, algebraic education is ended. Continuity of functioning of algebra is not a feature of the process.

On the other hand, if the purpose of training is continuity of approved human living, it must be remembered that continuity begins along most lines of activity in simple ways, even in infancy. These activities acquire large headway by the time the kindergarten is reached. The activities are extended in range, complexity, and subtlety during the elementary school years. They are further elevated and matured in the high school and reach the level of near-adult performance in the junior college. No intellectual activities get into the process but those of actual current intellectual

living, which make up a lifelong continuity. The physical activities likewise make up a lifelong continuity; so also the expressional activities, the health activities, social behavior, recreational activities, and all the rest. They will gradually change from year to year, but each is a continuity. The business of the school on every level is to take each of these continuities in hand and to guide it to ever higher and wider levels. The junior college as the capstone of the general educational system finishes each of them off so far as schooling goes. The individual's further general education is then turned over to his own self-direction without help from schools.

We may state the alternative principles in about this form:

1. The aims of general education do not require continuity of experience beyond that which is necessary for mastery for storage purposes of academic information and for mastery of the transitory academic attitudes and techniques. As soon as mastered, each thing may be dropped. The experience may come to a close—forever.

2. General education is essentially an ever ascending continuity of those activities which constitute an approved type of human behavior. In each line of its responsibility the junior college will be concerned with a segment of the seventy-year continuity of activities and will guide this segment during the final years of general schooling.

Now which of the two statements of the principle is the junior college to choose? It cannot choose both. Of course no individual will want to choose both. One who accepts the first will have so little interest in the second that he is not likely to know what it means. And, conversely, one who accepts the second will dismiss the first as antediluvian.

V. Should there be specialization in the junior college—a major course with perhaps a related minor or two? Or should general education be general education? It is common to have specialization even in the high school. There certainly is as much justification for it in the junior college. It has grown out of the conception of academic discipline. The purpose is to provide for discipline in a single field long enough to assure the academic attitudes and skills. The storage conception presents no obstacle. The latter has

guided the teaching of embalmed subjects so long that it has forgotten all sense of purpose. It is just teaching subjects. It can teach any subject. One is as good as another for its purposes since it has no purpose—beyond teaching the subjects. And since the storage conception offers no objections, the disciplinary conception takes charge and changes general education into a specialized education.

On the other hand, if education is for current behavior this behavior is made up of the same general kinds of things for all persons. For every person there are fifteen hours a day of intellectual activities to be taken in hand, improved, and if possible civilized. There are just as many hours of emotional living, which are even more in need of civilizing. For all persons there are twenty-four hours a day of the activities of physical living and health care. There are several hours a day of uses of language either in transmitting or in receiving of thought. For all persons there are similar civic responsibilities calling for similar participation in public opinion and similar discharge of the duties of citizenship. All will participate in leisure occupations, which, if wholesome, diversified, and fruitful, will be found in much the same general fields of opportunity. All should be performing certain unspecialized practical activities in the management of their homes. To state the matter in general terms, the broad lines of wholesome living are much the same for all persons. General education will guide the growth and refinement of behavior along these lines. There will be no specialization. There will be no majoring by one in intellectual living; by a second, in physical living; by a third, in civic living; and by a fourth, in recreational living. The only major will be life itself.

While there will be no specialization, of course there must be differentiation. A person must act according to his age, nature, and situation. In details no two lives can be alike. Opposing principles to be considered may be stated as follows:

1. The junior college is to provide either alternative academic curriculums or such numerous objectives that one can arrange specialized courses suitable for the necessary academic discipline.

2. Since the junior college is providing general education, it will expect all to be trained for the same general lines of living.

There will then be just one general course which is flexible enough to provide for individual differences.

In their implications for practical administration, these principles are as far removed from each other as the poles of the earth.

VI. Should the junior-college curriculum provide for two years work of sixty semester hours? Should it provide an equal amount of training for persons who are highly unequal in their natures and needs? Is two years anything more than an accident or a convenience of mechanical administration?

Each complete human life is a seventy-year continuity of activities. After the activities have been under way for five or six years, the schools take them in hand and seek to raise them to higher and better levels until one is able of himself to hold them to proper levels without the school's assistance. Schools then are asked to assist one until he is sixteen, eighteen, twenty, or twenty-five years of age according to his nature, situation, and powers of self-direction. As soon as one achieves the power of self-direction in the management of his general activities, the matter should naturally be turned over to him. From that point, the school has nothing further to do.

It is probable that a few persons could attain the level of wholesome civilized living by the time they are eighteen years of age and need no help from the junior college so far as general education is concerned. Such persons might go on at once to that portion of their education which lies beyond the general, namely, their specialized or professional education. Other persons might use one year with profit, but more would be waste of time. Others might use two years; still others, three years; and doubtless there are a few whose general education would call for attention for even four years.

"But," one says, "educational institutions cannot recognize the diversities of human nature, situations, and needs. Education can be administered only on the assumption that natures are so nearly identical that all need the same amounts." By assuming some such absolute falsity, an institution can prescribe a single uniform amount of training equally for all. That is something that can be

mechanically administered. The dominant motive of such curriculum is not right education of the students but rather ease of mechanical administration.

If now we take the opposite but more familiar point of view the factors are very different and the solution of our problem correspondingly different. The storage conception assumes in the beginning that *an education* is just the mastery of so many units of subject matter. For the junior college, this has been assumed to be sixty semester-hours. This assumption is involved in the definition of the junior college. There is no problem.

The general principle governing length of junior-college training may then be stated in these two alternative forms:

1. A junior-college education consists of the mastery of sixty semester-hours of academic subject matter, normally in two years of time.

2. A junior-college education is the culminating level of general education, and it should give such assistance to students as they need after the end of the high school in finishing their general education. The length of time will vary from zero to several years. The variations will doubtless approximate the normal curve of probability. It will no more be the same for all than is height, or weight, or the I.Q.

The foregoing six problems and tentative principles are but illustrative. There are scores of such problems, each of which calls for a solution that can be stated as a general formula or principle for the guidance of the practical worker. Probably nothing is more needed at present than a definite and conscious formulation of these principles. They cannot be derived entirely inductively, since they must be operative before we can have the data for inductive formulation. They must first be formulated as working hypotheses, and thus provide the data necessary for their validation or rejection.

CHAPTER III

THE CURRICULUM OF THE FOUR-YEAR JUNIOR COLLEGE

JAMES M. WOOD

The reconstruction of a curriculum involves an analysis of objectives, an examination of existing practices in the light of those objectives, a determination of the type of experience necessary to their realization, the discovery and expression of that experience, the setting up of appropriate and adequate administrative machinery, as well as an intensive study of the particular difficulties involved.

The limits of this article would scarce suffice for even a limited discussion of any one of these problems. Some have written books on the thesis that the objective in all education is the natural unfolding of the student's powers only to find that every step in human progress has been a defiance of such a thesis. An engine is free so long as it observes the laws of the road. When it refuses so to do, disaster results. These laws may be modified or completely reversed affording greater speed as well as greater security to the train, but until such has been fully demonstrated the engine would do well to keep to the track. The place for experimentation is in the laboratory. Others have written volumes on culture only to find it a chameleon. Others ascribe to knowledge per se a potency highly questionable, and so on ad infinitum.

Is not the real objective the use of racial experience in the solution of human problems? Furthermore, is it not possible to discover type problems that will cover in a fair degree the whole range of human experience? With these types (and they are comparatively few) clearly in mind, will it not be possible for the curriculum to utilize racial experience properly organized and properly administered? Granted these premises, any material used in a given curriculum must justify its incorporation from a functional point of view.

Let us, then, examine our position as educators. Clearly, the task is not to supplant but rather to supplement the efforts of other social agencies. Experiences that are adequately provided for by these agencies should receive scant, or no, attention from educational institutions. After having learned, both empirically and by scientific analysis, just what the major human problems are, the next task is to determine what part of those experiences lie within the province of the school, what racial experiences can best contribute to the successful meeting of those situations, and what machinery is necessary to the effective application of those experiences to the solution of the individual human problem.

The first task in so far as it pertained to the problems of women was undertaken at Stephens College nine years ago under the direction of Dr. W. W. Charters, and with the co-operation of 329 women, living in thirty-five different states and graduates of ninety-five different colleges and universities. One hundred and forty-three of these women were married and home-makers; 36 were married with vocations; 142 were unmarried but with definite professions, and 8 were unmarried and without professions. Their records covered every calendar month of the year. This fairly comprehensive view of the life of woman resulted in a list of 7,493 distinct problems of which 4,608 are the problems of home-makers and 2,885 the extra-vocational problems of unmarried professional women. The vocational activities of women were not included because the objective of the study was to determine the minimum essentials in a curriculum for women.

Even greater than the task of collection was that of classification. Clearly, it would be impossible, even if desirable, to offer 7,493 distinct courses. After weeks and months of study it was found that they could, with a fair degree of accuracy, be classified as problems relating to:

1. Food
2. Clothing
3. Physical hygiene
4. Mental hygiene
5. Communication
6. Transportation
7. Reading
8. Recreation and play
9. Study
10. Schooling
11. Reproduction
12. Religion

13. Philanthropy
14. Civic relations
15. Social relations
16. Music
17. Art
18. Literature
19. Nature
20. Gratification of random interest
21. Increase of circle of interest
22. Associative thinking
23. Introspection
24. Increase of income
25. Participation in vocations

It should be kept clearly in mind that these represent the problems of women, irrespective of their vocations in life, and constitute the irreducible minimum in a comprehensive curriculum. Unless some other social agency has already supplied the experience needed for meeting these problems, clearly it is the duty of the school to do so.

It is from a study such as this, but embracing the entire range of human experience, that a comprehensive curriculum for general education must come.

The changes that have come into the curriculum at Stephens College have been more or less drastic. Imagine, if you can, a textbook in Freshman English composition with chapter titles such as these: "Letter-Writing"; "Conversation"; "Group Discussion"; "Making a Speech"; "Making Reports of Experience"; "Giving Directions and Explanations"; "A Word about Diaries"; "The Class Club Program"; "Speech Improvement." Or visualize a text in English literature with such chapter headings as: "The Language of Painting"; "The Language of Music"; "The Language of Literature"; "Religion"; "Perspective through Parallel Lines"; "Perspective through Circles or Curved Lines"; "Melody." These are but two of the texts growing out of a conscientious attempt to furnish a curriculum that will meet the actual needs of the students. These are types of the sixty-two more or less comprehensive studies now in progress.

The curriculum of the two-year junior college is too limited in scope to permit even a cursory study of the problems involved in each of the twenty-five groups. This fact led the Board of Curators of Stephens College first to discuss the possibility of an extended program of general education that lay back of their request to the

North Central Association for permission to experiment with the four-year junior college.

The thesis back of that request was this: Educators for a quarter of a century have been insisting that the Freshman and Sophomore years of college belonged in the secondary rather than in the field of higher education. Why not test this theory by combining these years with the upper division of the senior high school, organizing both as a single unit of four years without the present artificial break at the end of the twelfth grade?

This arrangement automatically created two major problems, the one administrative and the other curricular. If the last two years of high school be absorbed into the junior college, what disposition can be made of the first two years? Clearly they should find their way into the junior high school, which in many places has already absorbed the Freshman year.

This administration reorganization will establish a six-year elementary school as at present, followed by a three- or four-year junior high school, leading in turn into a three- or four-year junior college, which leads directly into the professional schools of the university. It will be noted that the junior high school, extending roughly from the ages of twelve to sixteen, covers and permits the organization of subject matter and the adaptation of teaching methods to the needs and interests of early adolescence. The period covered by the junior-college unit, extending roughly from the ages of sixteen to twenty, permits the adaptation of the curriculum content and teaching methods to the interests and needs of later adolescence. The longer unit also permits the school system to adapt its curriculum to the abilities of the students. In any case, the honor student should be able to complete each of the two units in a period of three years, graduating from the junior college at approximately the age of eighteen, while the inferior group could be given an extended period. Should the four-year unit be retained it is confidently believed that possible reorganization of the curriculum within the junior high school and the junior college will ultimately cause the word "junior" to be eliminated from both.

It is impossible to enumerate the implications involved in this proposal. It is the ambition of practically every father and mother

that the son or daughter should have the practical and cultural advantages of a college education. Under the existing educational machinery, this has been reserved almost exclusively for an intellectual or a social aristocracy. Under the proposed reorganization, the liberal arts college itself would open its doors in every community now able to maintain a junior college. Through systems of consolidation, it would be brought to the doors of practically every community.

The demand for such reorganization of curriculum material and educational objectives and methods is responsible for the rapid development of both the junior high school and the junior college. It is imposible to think of them separately because one is the vitalizing unit in the lower and the other in the upper secondary field. These institutions possess two distinct advantages over their respective senior institutions. They are free from the traditions that hamper the free development of the senior high school and of the senior college. Unlike the latter institutions, they are the direct outgrowth of community needs and are not yet dominated by so-called intellectual standards. They represent a conscious and whole-hearted attempt to adjust the curriculum to the needs of the individual students. Since this is true, it is evident that those institutions should not be permitted to develop along traditional lines.

The Stephens College experiment with the four-year junior college is based upon the following assumptions:

1. That the essential elements of the work now done in the junior high school, the senior high school, and the junior college should be completed by the end of the twelfth grade. Should a longer period for general education be required it is quite evident that the remaining two years should cover the upper division courses of the liberal arts college and should lead definitely to the baccalaureate degree.

2. That the junior college, however defined, is an integral part of the secondary-school system.

3. That the work of the junior college should be organized upon the collegiate as distinguished from the high-school level

just as the work now attempted in the junior high school should be organized upon a secondary as distinguished from an elementary school level.

4. That these changes may be brought about through increased teaching efficiency, through the elimination of duplicate courses in college and secondary curriculums, through a thorough reorganization of curriculum content making it more definitely functional.

5. That these reforms may result not only in the saving of two years of time for the student and two years of expense for the community, but that this may be done without serious loss.

The specific nature of the experiment authorized by the North Central Association of Colleges and Secondary Schools is indicated by the following chart.

THE FOUR YEAR JUNIOR COLLEGE

Senior	XY	E	E	E	E	E
Junior	XY	Y	E	E	E	E
Sophomore	XY	Y	Y	E	E	E
Freshman	AY	BY	CY	D	E	E

A, B, and C, general orientation courses: science, social, and political science, humanities; D, vocational orientation course; E, elective and terminal courses; Y, required courses; X, prerequisite courses required.

It will be observed that three out of a possible five subjects offered in the Freshman year are designated as orientation courses. The purpose of this organization is to give the student at the beginning of his college course a comprehensive view of the entire field of human knowledge and at the same time to give him a mastery of the particular set of tools that he may need to use in his own field of endeavor. The completion of the courses as outlined brings the student not only to the door of the professional school, but it also provides him with a cultural and informational background needed by the ordinary citizen in the solution of his life-problems and gives him the training needed for the semiskilled trades and professions. A more detailed study of the proposed curriculum will probably make its ultimate objectives more intelligible.

FRESHMAN YEAR

I. SCIENCE

This is a comprehensive view of the entire field of science in its relationship to human progress and human welfare. It is neither geography nor geology, botany nor zoölogy, physics nor chemistry, but rather an overview of them all. It is designed not only to render more intelligible the work that a student may later undertake in any specific field of science, but also to give him the scientific approach to life and its problems.

II. SOCIAL AND POLITICAL SCIENCE

This course is designed to give the student an overview of the interrelationships of human beings and their activities, both constructive and destructive, which history has recorded as the results of such interrelationships. It serves definitely as a background for a later intensive study of the records of family, community, and racial life, together with the institutions that have developed as a direct result of the operation of social and economic forces.

III. HUMANITIES

This term is used to describe those fields of experience which represent the fullest expression of human emotions, such as literature, including drama; music, including poetry; art, including sculpture, painting, architecture, and forms of applied art; religion, including philosophy and ethics.

It is not the purpose of this course to enter intensively into any one field of culture, but rather through an overview of them all to give a broad cultural background by means of which a student will be able in later courses to evaluate specific fields of knowledge.

IV. VOCATIONS

The primary function of this fourth orientation course is to render the choice of a profession or of a vocation more intelligible. It is designed to acquaint the student not only with the nature of the professions, trades, and industries, but also with the possibilities for service in the various fields, the peculiar qualities needed

for the successful handling of problems, and the course of study necessary for its pursuit.

Suppose, for instance, that medicine has been selected as one of the major professions to which attention is to be directed. The student is first made aware of its position among the learned professions. He is given a comprehensive view of its history and its contributions to human welfare and happiness. His attention is directed to each of its major fields for specialization, the qualities needed for success, the peculiar courses of study to be pursued, the rewards both social and economic that may reasonably be expected.

A study, as complete as may be, is then made as to the present and probable immediate future supply and demand in that particular field. Such a study may show, for instance, a surplus in the field of surgery but a serious deficiency in general practitioners.

Before completing his course, the student is encouraged to select from each major field those professions for which he seems to possess most aptitude, and from those, the one or ones that seem to offer greatest opportunities. The latter choice determines very largely the type of course that he is to pursue during the remaining three years in the college.

V. TERMINAL SUBJECTS

Whatever field a student may elect for his major or for his minor work, the mastery of certain subjects that will be vital for practical or for economic efficiency in that particular field is necessary. Since these subjects are merely tools in specific fields of learning, they are designated as terminal subjects. In this group would fall applied mathematics, a reading knowledge of a foreign language, English composition, shorthand, typewriting, accounting, the technique of applied music, and preprofessional courses having as their objective—wholly or in part—the economic independence of the student.

SOPHOMORE YEAR

It will be noted that the student is required during the Sophomore year to elect courses from each of the three major fields covered by the orientation courses of his Freshman year. These selections are determined by the student's natural interests and

ability and are designed to make possible the selection of both major and minor fields of work at the close of the Sophomore year. Each department is required to introduce the student to a specific field of knowledge through a survey unit in that field; for instance, if a student elects chemistry as his subject in the field of science, he is given a survey course covering this entire field and introducing him not only to the fundamental forces operating in the fields of chemistry but likewise to the contribution that chemistry has made to civilization. This survey unit may cover a few days or a few weeks at the beginning of, or at any point within, the course, but in any case its immediate objective is to render more intelligible the work of the student in the classroom and in the laboratory. A similar course with the same objectives introduces and is an integral part of each basic subject in the curriculum.

In the field of the terminal subjects the objective is a mastery of the particular tool needed. A qualitative and a quantitative standard is maintained but without the usual artificial time measurement; for instance, the objective in the mastery of a foreign language as a terminal subject is an easy reading knowledge of that language. The normal time limit for that mastery is two years. The objective in the course, however, is not two years but the mastery of a reading knowledge of the language whether it be done in three months or whether it requires three years.

JUNIOR YEAR

At the beginning of his Junior year the student selects both his major and his minor fields of work. The former is based upon definite prerequisites, the latter is free electives within the field of his minor.

SENIOR YEAR

The only general requirement in the Senior year is the continuation of work in the student's major field which is designed not only to lead to an intelligent understanding of at least one field of human effort but also to prepare the student for more intelligent work in a professional school.

No attempt has yet been made to evaluate these required

courses in terms of hours. It is entirely probable that some of the work indicated, particularly the orientation courses of the Freshman year, should be offered in the lower secondary field. In any case ample time is afforded in the foregoing organization for the mastery of the technique required in some one semiprofessional field.

The junior, or liberal arts college, should mark the close of the period of general education. Leaving its doors, the student should possess those elements of culture needed for personal satisfaction as well as for intelligent participation in home and community life. He should be prepared for further study in the graduate or professional school of his choice. Through the mastery of its basic techniques, he should have become economically independent in some special field, or fields, of his own selection. Upon the completion of this course, the student should receive the baccalaureate degree.

It will be quite evident that the administrative objective of this experiment is the completion of the present junior college in twelve years and of the liberal arts college in fourteen years, the administrative prerequisite being a four-year secondary unit resting upon a six-year elementary unit.

These orientation courses have actually been used in the classroom during the last two years. In order to insure the integrity of the work, the heads of the respective departments have taught these Freshman classes and at the same time have taught parallel courses to regular Freshman college students. The comprehensive nature of the courses as well as the emphasis upon the functional point of view has made it necessary to develop a series of textbooks. These, in rough draft, were in the hands of students this last year and are now being edited for a second edition. Arrangements for a co-operative use of these texts are now being completed with certain outstanding public schools. This co-operative program will make possible a more intelligent criticism of text content, techniques of instruction, and a more complete measuring of results. The material used has developed from a study of similar courses offered in other colleges on the Freshman level, from a

transfer of subject matter previously used in upper classes in our own institution from the results of other curriculum studies and from a large range of textbooks and periodicals in which the organization has been fundamentally from the functional point of view. The method has been a daily record of classroom procedure by the teacher or a stenographer, a record of the teacher's own notes and impressions, and a dictation of possible texts by teachers. Overlapping of courses and omissions of material are safeguarded through weekly conferences of the orientation group.

The requirement for entrance to the Freshman year of the four-year junior college is satisfactory completion of the Sophomore year of high school with a minimum of seven units. All orientation courses meet five times a week, three for recitation, two for supervised study.

Observations based upon two years' experience indicate very little difference in the achievement records of students who have completed two years as against those who have had four years of high-school work. This was specifically tested the last year by mixing the two groups of students in the same classes. Little appreciable difference appeared in the comparative records.

This observation should not bring the discussion to a close without our first having pointed out certain major problems that demand attention. In the first place, the curriculum reorganization, to be complete, must begin in the elementary schools. Some administrative genius, directing the schools of a wide-awake, forward-looking community, and ready to consider the interests of its children as paramount to the demands of tradition, should shatter completely the present elementary-school organization. How this Jacob's ladder could have survived the critical intelligence of the American educator for one hundred years is one of the mysteries of modern times. How could they permit bundles of human activity, searching for new experiences under every clod and beyond every cloud, to be imprisoned year after year behind the bars of first grade, second grade, and so on. The objective of the elementary school is guidance into fields of experience and the teaching of adequate forms of expression. So far as the classroom is

concerned, this objective includes a mastery of reading, writing, arithmetic, spelling, music, art, the handicrafts, and the languages. And the greatest of these is reading. With the tools of expression at his ready command, the student is ready for the real acquisition of knowledge which centers around the adolescent (or secondary) period. Would it not be an interesting experiment to reorganize a system of elementary schools around the reading ability of its students, and for the avowed purpose of mastering at this time all necessary forms of expression. If this were done, there is little doubt that the period of general education could then be adequately covered in the first twelve years of the public-school course and that the student could pass immediately into the professional school of his choice.

Many consider the problem of teacher supply a grave one. If the time is to be shortened and the course of study enriched at the same time, from what source is the faculty to come?

This question is pertinent and not so serious as some believe. Even a mediocre person possessing certain definite qualities will become a great teacher if given an opportunity. What are these major qualities? The first is undoubtedly profound scholarship, for only an accurate knowledge makes possible the use of facts which is the ultimate objective in college as well as in life. This scholarship must be motivated, however, by a profound interest in human beings. The subject matter of a given course is of value only as it functions actively in the solution of a human problem. There must, likewise, be an ability to teach, i.e., to bring the fruits of scholarship to bear upon the problems of life. There must be a spirit of co-operation. Life is not a matter of science or philosophy, music or art, language or literature. It is a continuous, unitary process, incapable of control but capable of limited direction. Even to establish this limited control, however, philosophy must have the aid of science; science of art; art of institutional agencies. A faculty is, therefore, a group of individual integers molded together by a common objective which can be attained only through a whole-hearted spirit of co-operation. Finally, there must be an ability to grow which implies a realization that the job to be done is greater than one's ability to do. The teacher who is not

consciously trying to reach the unattainable has no place on a faculty.

Briefly, the major qualities sought in faculty members are profound scholarship, a reverence for human personality, ability to teach, a spirit of co-operation, and an ambition and capacity for growth.

These are but two of the many problems arising from this particular reorganization program. They illustrate at once the complicated nature of the study and the essential unity of the school system. The results of the study are as yet indefinite. Such as they are, they will, from time to time, be made available for your criticism or use.

CHAPTER IV

PARTICULARIZED TECHNIQUES IN CURRICULUM CONSTRUCTION IN A JUNIOR COLLEGE

JULIUS J. OPPENHEIMER

In this discussion of particularized techniques in curriculum construction in a junior college, I shall limit my comments to the techniques which have been used or which are now being used in the curriculum program of Stephens College, Columbia, Missouri. I shall attempt to bring out some of the administrative problems relating to curriculum construction in the junior college. I shall not go into the general theory of curriculum construction, nor shall I attempt to compare curriculum techniques used in Stephens with those used in other colleges.

Stephens College is a private junior college which is attempting to work out a four-year integrated program of studies. This means that the last two years of the ordinary senior high school (eleventh and twelfth grades) are united with those of the first two years of the ordinary college (thirteenth and fourteenth grades). This college is under the general control of the Baptist denomination. It has an enrolment of six hundred young women. It is what I should term a regional college in that it serves students from the states of Missouri, Iowa, Nebraska, Kansas, Oklahoma, Arkansas, Illinois, and other mid-western states. Of these six hundred girls, approximately thirty-five are in the first two years (eleventh and twelfth grades). The rest of them are college Freshmen and Sophomores. According to the investigations we have made, approximately 80 per cent of our graduates go on to senior colleges and universities. We have a staff of fifty-six full-time instructors and about ten part-time. Most of our students are not residents of the immediate community; hence they are housed in dormitories. Stephens College was founded about 1856 as a female academy; it was later made into a seminary, and finally into a regular four-year college.

It had a very precarious history until about eighteen years ago, when it was made into a junior college under the influence of the University of Missouri. Since this change it has had a very satisfactory growth.

Without going into a lengthy discussion of the policy of the college, I shall list some of the fundamental policies which affect the curriculum. First, one of the dominant notes in the administration has been to place emphasis on the individual student. Second, the college feels that education is functional in nature, that is, it should meet the immediate needs of the individual student and should prepare the student for a changing social order. I desire to emphasize the functional viewpoint in contrast with the ordinary subject-matter viewpoint. Third, since the college is interested in furthering the growth of the individual student in contradistinction to interest in subjects, the college has felt that it must take an experimental attitude toward the traditional subjects, requirements, and organization which are so well established in the lower years of the liberal arts college. This means that the college has hoped to reorganize curriculum materials and methods of teaching to meet better this functional ideal. Fourth, the college wishes to give the individual teacher the maximum of initiative in changing materials and methods of teaching. Teachers are encouraged to carry on some type of experimental work, but no teacher is assigned by the administration to do a piece of work unless that teacher has taken the initiative to express her interest in some project. In selecting faculty members the administration endeavors to select those individuals who are interested in experimental education along with the usual requirements of scholarship, personality, and character. To the credit of the faculty, I may add that in all departments (counting major and minor studies) some sixty projects have been worked out.

ADMINISTRATION OF THE CURRICULUM PROGRAM-ORGANIZATION

In 1920, President Wood established in the college a department of educational research. He appointed Dr. W. W. Charters as director. The curriculum program has been carried forward

under his direction on a part-time basis. The dean, who was made assistant director, carries out plans in the absence of Dr. Charters. Without going into greater detail, I shall give the main scheme of the administration which has been as follows:

First, the maintenance of the curriculum research, in the main, has come out of the regular college financial resources.

Second, the director visits the institution four or five times a year and devotes in all approximately a month's time to this work.

Third, beginning the first Monday in September, before the opening of the school, and continuing for from ten to fourteen days, the faculty assembles for a conference. This conference is under the supervision of the director of research. The faculty conference is a very significant part of the curriculum program. The following types of subjects are discussed: (*a*) the purpose of the curriculum program; (*b*) what has been done in the college in curriculum construction; (*c*) projects under way; (*d*) reorganization and enlargement of present courses; (*e*) curriculum projects which might be taken up; (*f*) administration and extra-curriculum problems which effect the curriculum program; (*g*) individual conferences on curriculum projects. The fact should be noted that an opportunity is given to individual faculty members to confer with the director on special curriculum projects. During the last two years it was found advisable to divide the conferences into two parts, namely, a section for those who have just come to the college and another for those who have been at the college for some time.

Fourth, during the visits of the director he follows up the individual projects, observes the school in operation, and inaugurates new projects.

Fifth, the bi-monthly faculty meetings are used to carry on discussions which the fall conferences have raised and to seek in the current literature on experimentation in colleges for suggestions relative to the improvement of the present curriculum. A number of our present projects have resulted from such suggestions.

Sixth, the actual curriculum work has been carried on in two ways, namely, by special workers who do particular pieces of work,

and by individual faculty members who are relieved of part of their teaching duties and who are given clerical, stenographic, and sometimes, technical assistance.

TYPES OF LIBERAL ARTS CURRICULUMS

Stephens College is committed to the idea that the junior college is an integral part of secondary education. Secondary education should be primarily concerned with liberal or general education. This does not mean that secondary education should not have terminal curriculums for vocational purposes. On the other hand, it does not mean that secondary education should be primarily concerned with preparation for future schooling. I believe that the preparatory idea is best served by giving to the individual those elements and techniques of our modern culture which are meaningful to him at the time of learning and at the same time raise him to a higher level of social understanding and responsibility. The liberal arts college believes that the individual will become cultured by introducing him to the major fields of knowledge. Consequently, the group system which now is most common in American colleges is used. For instance, the liberal arts college sets up its Freshman-Sophomore requirements, viz., foreign language (ancient and modern), physical science, biological science, social science, English, and philosophy. These subjects are usually organized on the following bases: (1) as introductions to subsequent courses in the special fields and, therefore, all too often, with the view of developing specialists in those fields; and (2) as logically organized bodies of knowledge—facts and principles presented in terms of their relationships and sequence. In contrast to this type of organization is the functional type. What problems, difficulties, and types of experience is the individual meeting or will he soon meet? Instead of going into the well-established and well-organized fields of learning and asking what the individual should study in order to understand these fields, the activities of the individual are analyzed. Dr. Charters calls this method of determining curriculum objectives, functional analysis.

The introduction of orientation courses at the lower college level provided a third general type of course in college curriculums.

The orientation course attempts to give the student an overview of large areas of human knowledge. It has an additional purpose of integrating fields of human knowledge. The liberal arts courses of the past had a tendency to divide fields of learning into very small parts. The orientation course attempts to show relations between fields. It shows the general importance of a given field to modern life. I believe it is fair to say that the orientation course endeavors to show how the subject matter in a general field is of importance to the student in his endeavor to understand the modern world. In that degree it is functional.

At Stephens we have courses of the three general types: those inherited from regular liberal arts college; those derived from functional analysis; and those built on the objectives of general orientation. Most of the elective courses may always be of the liberal arts type; the required courses are to be of the two general types, functional and overview or orientation.

In addition to this classification one can look at the program from the standpoint of immediate reorganization and of long-time curriculum procedure.

Another way of looking at the parts of the curriculum program is in terms of primary and secondary levels. By primary level is meant the determination of the major objectives of the general fields or subjects to be taught. By secondary level is meant the analysis of specific objectives and materials that make up *one* subject. Dr. Charters' determination of the required subjects through his analysis of women's activities is on the primary level; that of Dr. R. I. Johnson's expressional activities—the specific objectives of English composition—is an example of the secondary level.

DETERMINATION OF MAJOR OBJECTIVES BY FUNCTIONAL ANALYSIS

If a college wishes to formulate a curriculum for young women on the junior-college level, what subjects should be taught and on what bases should these subjects be selected? This was the problem that confronted the president and the director of research in attempting to make a curriculum for Stephens College. They wished to start out on a new plan and not to accept the group plan

of the liberal arts college. Dr. W. W. Charters has answered this question in a study which he made and completed about three or four years ago. This study is called *Women's Education: A Functional Study*.[1] He designated this as a major curriculum survey for Stephens College. It is a basic survey of the general field that the curriculum of a junior college for young women is to cover. As far as I know, it is the first attempt to determine the required courses of a liberal arts college upon a more objective basis than those of tradition, faculty opinion, or administrative order. (For a discussion of the techniques employed see pp. 29–31.)

ORGANIZATION OF THE ORIENTATION COURSES

The fact should be recalled that there are two general types of curriculum organization that are being used in the curriculum program at Stephens, namely, (1) the functional analysis type, and (2) the overview or orientation type. (For a detailed discussion of the four-year junior-college and orientation courses see pp. 32–40.) The orientation courses have been placed in the first year of the four-year junior college, or, in other words, in the junior year of the ordinary four-year high school. These courses are as follows: humanities, which deals with the aesthetic and emotional values of life especially in the fine arts; introduction to natural science, which is concerned with the nature of the physical and biological world and man's relation to it; introduction to social science, which is concerned with man's cultural achievement and his present social relations; and vocations, which is concerned with giving the student a picture of fields open to women and of various problems of adjustment that women must make to vocations. The curriculum technique employed in the organization of these courses is in a large degree subjective. That is, the instructor endeavors to select those materials which will carry out the following aims: (1) to show the student what this major field of activities means to him; (2) to show the student the organization of large areas of human knowledge and activities and their major problems; (3) to show the relation of the various fields within these areas; (4) to show the

[1] Typewritten manuscript, 2 volumes (Columbia, Mo.; Educational Research Department, Stephens College, 1926).

contribution of these fields to modern life; (5) to understand something of the general techniques employed in the study of these major fields; and (6) to aid the student in planning his future educational and vocational program especially in regard to selection of courses in the junior and senior college.

Orientation courses in other institutions, experiments in survey courses, and suggestions for the improvement of lower-classmen subjects have been used. Careful records, especially stenographic notes, are being kept of the classroom work. Rough drafts of books have been made. Through controlled groups, attempts will be made to compare the success of students taking these courses with those taking regular high-school work. This is the major part of the experiment that the North Central Association authorized. The general advisory committee, composed of Dr. Charles H. Judd, Dr. Leonard V. Koos, and Dr. George F. Zook, have general supervision of the nature of these courses and also of the experiment relating to the four-year junior college.

A POSSIBLE CURRICULUM OF REQUIRED SUBJECTS IN A FOUR-YEAR JUNIOR COLLEGE

As a consequence of combining the results of the two general types of curriculum organization, the required subjects are distributed about as indicated in the accompanying diagram.

Freshman	Social Science Orientation	Humanities Orientation	Natural Science Orientation	Vocations Orientation
Sophomore	English	Health Physiology Hygiene		Consumption
Junior		Psychology	Social Science	
Senior	Philosophy			Aesthetics

There are several questions that must be answered before this scheme could be accepted, viz., Is such a combination of functional analysis and orientation subjects logical and consistent? Are gen-

eral theories underlying each compatible with the other? Will there be overlapping? What is the optimum placement of each subject? How much time will each subject require?

TECHNIQUES USED ON SECONDARY LEVEL

As a result of the basic study which Dr. Charters made of the needs of college women, the faculty and other workers have endeavored to work out in greater detail required courses. The first course which was organized was expressional activities in English, which is called ordinarily English composition. Dr. Johnson[2] made an analysis of the need of oral and written English by analyzing activity lists from 104 Freshman women in Stephens College. Similar information was secured from their mothers or some immediate woman relative. He asked that they list the activity that they had actually performed or had been asked to perform and would have performed if they had been capable of doing so. From this he classified the English activities in large groups under the following heads:[3] social, civic, business, domestic, religious, and leisure, and he tabulated the fragments of each activity under these general headings. He found, for example, under social that writing letters had a frequency of 104, conversing, 98; under civic, discussing plans and opinions in group meetings, a frequency of 28.[4] As a result of this analysis, he distinguished nine major types of English expression: letters, conversation, group discussion, formal discussion, reports, personal memorandums, special occasion talks, directions, instructions, explanations, and story-telling.[5] He discussed his curriculum study until subject-matter units had been selected. As an example of a more detailed analysis of one of the major activities, he tried to determine what constitutes a good letter. His examination of what textbooks said in reference to letter-writing, which was largely based on individual opinion, did not materially help the student in letter-writing. He studied rather such items as the following: (*a*) 150 selected letters by contem-

[2] Roy Ivan Johnson, *English Expression: A Study of Curriculum Building* (Bloomington, Ill.: Public School Publishing Co., 1926); also a dissertation for the degree of Doctor of Philosophy, University of Chicago, 1925.

[3] *Ibid.*, pp. 16–17. [4] *Ibid.*, pp. 22–23. [5] *Ibid.*, pp. 29-34.

porary women of literary ability and leadership; (*b*) a group of 296 modern collections of literary letters; (*c*) a similar selection of business letters composed by presidents and managers of educational institutions; (*d*) 1,000 letters from young women of approximately college Freshman standing. He was able to set up the characteristics of good letters by analysis of the letters of groups *a* and *b*. He then made a study of the characteristics of business letters and compared them with the standard set up in the ordinary textbooks. The comparison of student letters with the standards of a good letter showed him the difficulties that students encountered in attempting to write a letter. With the assistance of Miss Laura Searcy, instructor in English at the College, he has carried through an analysis of the other major activities. This material has been available in mimeographed form but will be published for future use in the autumn, 1929.

Dr. Jessie Allen Charters, with the aid of Dr. Thelma Gwinn Thurstone, made an analysis of the psychological problems of women.[6] In this collection of materials covering a period of four years, the authors endeavored to collect problems of women which might be solved through a knowledge of psychology. More than 3,000 of the problems were obtained from students of Stephens College. In addition to these problems, co-operation was secured from various institutions and groups: Pennsylvania College for Women, University of Pittsburgh, University of Missouri, a group of college graduates, college women's diaries, high-school girls, women's clubs, and department stores. Magazine articles in *McCall's Magazine* and letters sent to Dorothy Dix were analyzed. Altogether 1,223 papers were collected and a total of 4,626 problems were recorded. The main technique used, however, was that of asking individuals to list important personal problems such as those touching on clothing and personal appearance, health, personality, personal conduct, women friends, men, family, study, clubs, sorority, other organizations, religion, future, and other unclassified problems. As the problems were collected they were abstracted so that each problem made a separate unit. The problems were stated in the terms of the

[6] *Psychological Problems of Women,* unpublished typewritten manuscript (Columbia, Mo.; Educational Research Department, Stephens College, February, 1928).

writer as nearly as possible, and, after being classified, those most frequently mentioned were made into general classes. In the Stephens College group the various problems were classified under thirty-five heads. Some of these are science, homesickness, sorority, study, popularity, her people, etc. At the present time the professor of psychology, Dr. Rexroad, is checking problems in the textbook against the derived list and is attempting to formulate a list of principles of psychology which are needed to help a student meet her personal problems. He plans supplementary materials where the text is inadequate.

Education in civic relations is attempted through an elective course called "citizenship" and through experience in organization or group relationships on the campus. A comprehensive study[7] was made of the *Readers Guides* at five-year intervals from 1900 to 1925, inclusive, to determine the major topics discussed in American periodicals and to determine the trends of interest in these topics as measured by frequency of mention. This study has been supplemented by other researches in this field, especially those of Bobbitt,[8] Hockett,[9] Harper,[10] and Meltzer.[11] Hockett and his workers have selected a group of books that illustrate "frontier" thinking in problems of civic relations. They present a very comprehensive list of major problems. No curriculum-maker in the field of social studies should fail to use this list. Harper presents an opinions test for American educators, but his test by its very nature contains a group of major problems on which there is wide difference of opinion. Meltzer gives a carefully determined list of concepts derived from journals of opinion. The various parts of these studies which provide lists of (*a*) most important civic topics (and their trends in frequency of mention), (*b*) crucial and insistent problems and issues, and (*c*) important social science

[7] J. J. Oppenheimer. Unpublished typewritten study (Stephens College, 1927).

[8] Franklin Bobbitt, *Curriculum Investigations* (University of Chicago, 1926).

[9] John A. Hockett, *A Determination of the Major Social Problems of American Life* (Bureau of Publications, Teachers College, Columbia University, 1926).

[10] Manly H. Harper, *Social Beliefs and Attitudes of American Educators* (Teachers College, Columbia University, 1927).

[11] Hyman Meltzer, *Children's Social Concepts: A Study of Their Nature and Development* (Teachers College, Columbia University, 1925).

concepts, have been compiled into a guide for instructors in citizenship. In addition mimeographed materials[12] have been prepared. At present a syllabus and collection of readings are being compiled. Student opinions are being collected on (*a*) nature of the course, (*b*) problems they want to study, and (*c*) problems that are discussed informally in their rooms. Through the Junior League of Women Voters, discussion groups, student organization conferences, and individual students, attempts are made to induce students to study their immediate problems of group (especially campus civic) relationships.

Dr. Louise Dudley has incorporated her answer to the problem, "What would you teach about literature if you wanted the student to remember it the rest of her life?" in her book, *A Study of Literature*.[13] In this course she attempted to work out the aesthetic appreciation of literature. At present she is extending the course into the fields of the other fine arts such as music, sculpture, painting, etc. She endeavors to emphasize two major problems: (1) the principles underlying the judgment of literature, or what is good and bad in literature, and (2) the knowledge of types of the best. The particular curriculum technique which she used in selecting the content of the course was that of the analysis of a major field of knowledge in its bearing and relationship to the individual. She has used the integrating objective which is found so frequently in the orientation courses. At the same time she has tried to make her materials functional by giving to the individual techniques of judgment as well as by acquainting her with the extensive products of culture in the fields of the fine arts.

During the last year Dr. Kenneth I. Brown, of the Department of Religious Education, has been endeavoring to determine the content of a course in contemporary religious and moral problems. He has been compiling for the last two or three years, through his class and through religious groups, religious and moral problems that concern students. In addition, he is using the general technique employed by Hockett in making analyses of religious and moral problems as found in such magazines as the *Atlantic Monthly, Har-*

[12] W. C. Beasley and Mabel Elliott, *An Introductory Study of the Family Group*, mimeographed form (Stephens College, 1928).

[13] Boston: Houghton Mifflin Co., 1928.

per's, the *World Tomorrow, Christian Century,* and *Religious Education.* He has also undertaken to collect books written by "frontier" thinkers in religion (technique employed by Hockett). He will probably make an analysis of the fundamental principles of the outstanding philosophies and systems of ethics. (This study is in progress.)

What should be taught in a required course in health for women college students? In order to develop the content of such a course, Dr. E. L. Van Buskirk has been endeavoring to determine general health objectives. He has been doing this through the following studies: (1) checking over and compiling health problems which were mentioned in Dr. Charters' *Women's Education: A Functional Study;* (2) compiling health questions asked by students from the members of the medical and physical education staffs and from the heads of the dormitories; (3) compiling the health problems as indicated on the (Stephens') blank which parents fill out in regard to their daughters; (4) analyzing the questions and answers that have appeared in the health column of the *St. Louis Post Dispatch* and the *Chicago Tribune;* (5) listing the problems as indicated by other studies such as that of Isabel Davenport[14] and that of Wood and Strang;[15] (6) examining the college infirmary records; (7) examining lists of books and magazine articles in regard to health courses and health needs. This study, as you will note, is still in progress.

No work has been initiated to determine the objectives and materials to be used in a course on consumption.

The educational program at Stephens covers more than classroom activities. There is a conscious attempt to introduce various types of education into the social and community life of the school. A great deal of social education must necessarily be introduced through the social life on the campus. Several years ago, two instructors, Miss Frances Ruml and Miss Marjorie Carpenter, collected from students specific questions on social relations such as etiquette, social conventions, and manners. The students were

[14] *Salvaging Young Womanhood.*

[15] "The Making of a Course of Study in Health for Specific Situations," *Teachers College Record,* November, 1925.

asked to write down specific questions that they wanted answered. These two investigators also interviewed a number of students. Faculty members were asked to list the difficulties that students encountered in regard to social conventions and etiquette. As a result a long list of questions was secured. The answers to these questions were procured from standard books on etiquette. These answers from standard works had to be modified to meet mid-western and present-day standards. This modification was made by a group of qualified faculty women and other women competent in social training. This study is called the *Courtesy Book*.[16] At the present time, the same technique is being used in determining personal grooming problems of young women. Several trait analyses have been made. The students and faculty some five years ago agreed to the general objectives of the college expressed in what are called the "Ten Ideals." They are:

1. Courtesy in speech and action.
2. Forcefulness in accomplishing what one sets out to do.
3. Health in body.
4. Honesty in word and deed.
5. Self-discipline of sufficient power to control thought, speech, and action.
6. Love of scholarship which is careful and exact.
7. Appreciation of the beautiful as an intimate and integral part of one's life.
8. Reverence toward the spiritual.
9. Dedication to *service* in the interest of one's home, one's friends, and one's community.
10. Maintenance of a *cheerfulness* of manner and a happy outlook on life.

These were derived by beginning with a list of two thousand words which indicated personal qualities and by reducing them to ten major ideals. Various student groups have worked or are working on one or more of these ideals. A council of student leaders[17] worked out a list of trait actions on forcefulness and tact for student officers. They have also listed the duties of the major campus officers. Home economics courses make use of *Traits of Homemakers*[18] as one of the bases for course content.

[16] Pan-Hellenic Council, *Stephens College Courtesy Book* (Columbia, Mo.: Stephens College, 1927).

[17] *Report of Student Activity Division, Stephens College* (Columbia, Mo., 1926).

[18] W. W. Charters, "Traits of Homemakers," *Journal of Home Economics,* XVIII (December, 1926), 673 ff.

TYPES OF TECHNIQUES EMPLOYED IN IMMEDIATE PROGRAM OF REORGANIZATION

As I have indicated before, we look upon the curriculum program from two points of view, namely, that of long-time investigation and that of immediate improvement of existing courses. There are several means which are being employed to modify the courses which we are now offering. Some of these are as follows: (1) faculty conferences; (2) a professional library for the teaching staff including research studies; (3) the consulting service of a director of research; (4) class visitation; (5) constant use of the fundamental study of *Women's Education*;[19] (6) the annual outlines of courses; (7) organization of survey units; (8) the development of service subjects, and (9) experiment carried on in connection with a general seminar. A brief explanation of some of these means of improving the present curriculum will suffice. Each instructor is asked to use the major study, *Women's Education: A Functional Analysis,* in order to see what topics he may well use that are not now included in his course. A careful check is thus made of the courses that are being offered. The best means of securing up-to-date outlines which was devised has been that of asking each instructor to hand in an outline of his courses each year. He is asked to follow a general outline including the following items: aims, ideals involved, procedure, materials, time, suggested changes, and enrichment.[20] These outlines are typed during the summer and made into bound volumes. This plan puts into permanent form a record of what the curriculum is at the present time and any changes which are being made. Such materials are of considerable use to new teachers. Each faculty member is asked to include a survey unit in each introductory course, or in the first course in a field, such as elementary French, introduction to zoölogy, etc. The theory of the survey unit is to give the student a brief overview of the general field of which the subject is an introduction. The general outline of a survey unit is as follows:[21] (1) importance

[19] W. W. Charters, *op. cit.*

[20] *Outlines of Courses,* unpublished, typewritten (Stephens College, 1927–28).

[21] *Survey Units* (1927), pp. ii–iii.

of this subject to modern life; (2) the general nature of this particular field of knowledge; (3) aims and objectives of the courses to be given in the subject; (4) tools, methods, and techniques needed; (5) basic information (what information should be taught with which an intelligent person should at least be familiar); (6) development of appreciation in addition to the general points already mentioned; (7) guidance to selection of courses at Stephens and in a senior college; (8) tests to place the student; (9) vocational opportunities; (10) how to study the particular subject.

Several investigations have been made with the idea of removing student difficulties that are caused by failure to secure basic facts or techniques in prerequisite subjects. These are called service subjects. For example, students in clothing and foods classes were having difficulty with mathematical computation. Mrs. Callaway, Professor of Mathematics at Stephens, made an analysis of a number of clothing and foods texts to find out what mathematical problems and processes were necessary to solve problems in clothing and food.[22] Mrs. Beauchamp, professor of Latin, made an analysis of mythological references found in art books and worked out a manual.[23]

A similar analysis is being made of first texts in accounting. Stephens College offers a two-year curriculum in secretarial training. The courses in this curriculum are being worked over on the basis of the duty and trait analysis made by Charters and Whitley.[24]

Mrs. Lucy Hawkins Medley compiled a number of case studies of difficulties women and high-school girls were having in selecting and purchasing clothing.[25] The case-study technique was applied in the study of clothing problems.

During the last year, three of the instructors in the departments of psychology, religious education, and social studies have been

[22] T. T. Callaway, "Mathematics Needed in Elementary Clothing," *Journal of Home Economics* (October, 1922), pp. 465 ff.

[23] Pearl Beauchamp, *Service Mythology,* typewritten, unpublished (1926).

[24] W. W. Charters, and I. B. Whitley, *Analysis of Secretarial Duties and Traits* (Baltimore: William & Wilkins Co., 1924).

[25] *Clothing Management Problems,* mimeographed (Columbia, Mo.: Stephens College, 1923).

conducting a problems course for second-year college students on the seminar plan. Students were admitted to the course who submitted problems that they were interested in and outlined one problem in detail. The course consisted largely of the report by students of their investigation of specific problems, discussions, and the criticisms of these reports by fellow-students and instructors. Some of the problems submitted were: (1) question of law and law obedience; (2) "Religion: What is it? Why a difference in creeds?" (3) leisure; influence of modern machinery—giving more time; (4) marriage versus career; raising a family; (5) ideals versus tolerance; (6) Christianity and the present-day church; (7) "What is conscience?" (8) "What is our ultimate aim in life?" (9) the problem of "the good life."

The students have been so much interested in the course and so much interest has been aroused among other students that the course will be offered next fall. The curriculum technique is very simple, consisting chiefly of the selection by students of their own problems of study and of granting a large degree of student control over method. If this type of class continues to meet student needs, other groups will be formed. Another technique which may be used is that of collecting problems discussed in informal student dormitory groups. A number of students have volunteered aid in collecting such problems, and classes in citizenship have been asked to list problems.

SUMMARY OF TECHNIQUES AND STUDIES

By way of summary the following outline of general types of curriculum techniques will help in presenting a clear notion of the program. The rough classification of headings is by no mean logical. An attempt was made to classify the studies under the most characteristic heading. One can easily see that the divisions overlap.

A, adult; *S*, student;

I. Activity analysis

A. Diaries. *A*

1. Comprehensive analysis of all required subjects
2. A check list for improvement of present courses

A, adult; *S*, student;

B. Letters
   1. Of contemporary literary women *A*
   2. Of collections of literary letters *A*
   3. Of college administrators *A*
   4. Of business men *A*
   5. Of women relatives of students *A*
   6. Of students *S*

C. Secretarial duties *A*

D. Major campus officers *S*

II. Difficulty analyses

A. Questions written—in response to request
   1. Psychology *AS*
   2. Health *S* (Davenport and own)
   3. Informal dormitory discussion *S*
   4. Grooming *S*
   5. Courtesy *S*
   6. Religious and moral *AS*
   7. Problems for course *S*

B. Interviews
   1. Psychology *AS*
   2. Secretarial studies *A*
   3. Informal dormitory discussion *A*

C. Case studies
   1. Clothing management *AS*
   2. Household problems *A*
   3. Religious and moral *S*
   4. Discipline *S*

E. Personal inquiry to newspapers and magazines
   1. Health *A*
   2. Psychology *A*

F. Subject-matter difficulties determined by pretest
   1. English composition (Iowa University and own)
   2. Modern language (Iowa University and Columbia University)
   3. Mathematics (Iowa University and own)
   4. Chemistry (Iowa and own)
   5. Citizenship (own)

G. Variations in opinions
   1. Citizenship (Harper, National Y.W.C.A.)
   2. Religious fundamentals (own)

H. Inquiry into postschool needs
   1. Physical education *A*

A, adult; *S*, student;

III. Analysis of indirect materials
- A. Magazines for issues and problems
  - 1. Religious and moral *A*
  - 2. Citizenship (Harper) *A*
  - 3. Psychological *A*
- B. Magazine to secure topics to show trends
  - 1. Citizenship *A*
- C. Magazine to secure concepts
  - 1. Citizenship (Meltzer) *A*
- D. Newspaper for topics
  - 1. Citizenship (Bobbitt) *A*
  - 2. Health (Bobbitt) *A*
- E. Book to secure foreward-looking problems and issues
  - 1. Citizenship (Hockett) *A*
  - 2. Religious and moral *A*
- F. Textbook analysis to check content against needs
  - 1. English composition *A*
- G. Textbook analysis for service subjects
  - 1. Mathematics in chemistry *A*
  - 2. Mathematics in foods and clothing *A*
  - 3. Mathematics in accounting *A*
- H. Mythology in art *A*
- I. Medical clinic records *S*
  - 1. Health *S*
- J. Parents' reports to college
  - 1. Health *S*

IV. Trait analysis

Ten ideals for student body *S*
Forcefulness and tact for club officers *S*
Courtesy for sorority girl *S*
Home-makers *A*
Courtesy *S*
College teachers *A*
Secretaries *A*
Classroom honesty *S*

V. Overview analysis

Orientation courses (4)
Aesthetic appreciation (English literature)

Too often persons who have not attempted curriculum construction criticize workers in the field for not carrying the process beyond the stage of determining objectives. Curriculum workers, I believe, are painfully aware of the needs for further steps to complete the process. The two major difficulties are time and adequate techniques. At present we have fairly adequate techniques to determine objectives of subjects, but beyond that stage little has been done. Methods of selecting materials, types of optimum organization, style of writing, grade placement, methods of teaching, and adequate tests of informational and behavior achievements are serious problems that require long periods of time and expenditure of a great deal of effort. In all curriculum construction there is constant need for an adequate philosophy of education.

CHAPTER V

THE JUNIOR-COLLEGE CURRICULUMS IN CALIFORNIA

LEONARD V. KOOS

In a number of ways the public junior colleges of California as a group are at a more advanced stage of development than are those of other states. Individual units will be found there probably just as weak as any to be found elsewhere, and individual institutions elsewhere can be found which are probably just as strong as the better units in California. However, a number of factors give them greater strength collectively than those in any other state.

It is rather generally known that there are more public junior colleges in this than in any other state. In 1927–28 there were thirty such public units, not counting those maintained in connection with state teachers' colleges. Enrolled in institutions of this type, that is, not counting those enrolled in units maintained in connection with teachers' colleges, were 6,688 students in 1926–27, and probably 8,000 students in 1927–28. Including students in units in state teachers' colleges, the number during 1927–28 must have been well up toward 10,000. Among the factors influencing this large and rapid numerical development of junior colleges is the high degree of popularization of high-school education. The writer found for 1926–27 that 74.8 per cent, or practically three-fourths of all the population of high-school age, were enrolled in public high schools. One is fairly safe in assuming that in no other state has high-school education been popularized to such a stage. With such large proportions of the population in the high schools, the numbers seeking opportunities for education on the collegiate level are larger, thus preparing the ground for the rapid growth of junior colleges. A second factor significantly related to this one and peculiar to the conditions of admission to higher institutions in California will be brought out later in this article.

Another factor contributing to the rapid growth of junior colleges is the financial resources that may be drawn upon and the relatively generous program of state aid as compared with programs of aid in other states. A factor of strength is to be found also in the standards of teacher preparation for schools on levels below the junior college. For example, to receive credentials to teach in academic fields in the high schools of California, one must have the equivalent of a year of work beyond the Bachelor's degree. In such a situation, especially when combined with an influx of teachers from other states, it is not as difficult as elsewhere to find teachers meeting or exceeding the usual minimum requirements for service on the junior-college level.

THE "COLLEGE APTITUDE" OF JUNIOR-COLLEGE STUDENTS IN CALIFORNIA AND ELSEWHERE

An important consideration in any descriptive or analytic treatment of the curriculum situation in junior colleges in California or elsewhere is the ability of the students. In connection with the preliminary survey of secondary education in that state, a survey from which certain materials are being drawn for this article, it was possible to secure evidence concerning the performance on the Thorndike College Aptitude Test by Freshmen in six public junior colleges and in three other higher institutions of the state. The junior colleges are representative of the various types of public junior colleges in the state, except that no state teachers' college is included. The three other higher institutions are among the most estimable in the state, and admit only on a highly selective basis. All tests were given and scored under standard conditions. The numbers of students tested were: junior college, 1,172; other higher institutions, 1,710. These numbers are large enough, in view of the representativeness of the institutions included, to afford a basis for a reliable comparison. The University of California is not represented, because the parent-institution at Berkeley had not systematically administered such tests to its students. It may be safely assumed that the distribution of scores for Freshmen at the University of California would not be widely at variance with that for the three other higher institutions represented, because require-

ments for admission there are also intentionally selective in character. Admission of high-school graduates is on the basis of principals' recommendations. These in turn are usually made only for high-school graduates who have earned marks of "A" or "B" in fifteen units (less often twelve units) of their four years of high-school work.

The median scores on the Thorndike College Aptitude Test for junior-college Freshmen was found to be 61.2. For Freshmen in the other higher institutions, it was 75.8. This indicates a wide difference between the two groups. Comparison of the two distributions brings out the difference more strikingly. Although there are junior-college Freshmen whose scores are almost as high as the highest in the other group, the *proportion* of high scores is much smaller. Also, the lowest scores for junior-college Freshmen drop lower than for Freshmen with the smallest scores in the other higher institutions, and the proportion of low scores is much larger. It is clear enough that, although the two groups of Freshmen overlap in ability, large proportions of those in the junior-college group are less capable, when measured by these tests, than are those in the other higher institutions.

It will help to an appreciation of the significance of this difference to bring in evidence from two comparative studies in other situations in which junior-college students are involved. Stoddard has reported a comparison[1] of Freshmen in the junior colleges in Iowa with Freshmen in the University of Iowa. The tests given were four in number, comprising a battery designated as the "University of Iowa Qualifying Examination of 1927." They were (1) the Iowa Comprehension Test, (2) the Iowa Placement Examination, English Training, (3) the Iowa Placement Examination, Mathematics Aptitude, and (4) the Iowa High-School Content Examination. Besides the scores on these tests for about 380 Freshmen in eleven junior colleges, data for comparison were at hand for more than 1,000 Freshmen in the University of Iowa.

In the interests of brevity medians only for the two groups of Freshmen, that is, junior-college Freshmen and Freshmen in the

[1] George D. Stoddard, "A Mental Educational Survey of Iowa Junior Colleges," *School Review*, XXXVI (May, 1928), 346–49.

University of Iowa, will be cited. For the Comprehension Test the medians were 23 and 22, respectively; for the Placement Examination, English Training, 89 and 85; for the Placement Examination, Mathematics Aptitude, 22 and 18; for the High-School Content Examination, 113 and 112. There was a small but consistent superiority in favor of the junior-college Freshmen, a superiority borne out by medians of the respective weighted composite scores on the four tests, which were 359 and 340. Stoddard concludes that "while the difference between the groups is slight, it is significantly in favor of the junior-college group."[2] At least one could hardly contend that these junior-college Freshmen in Iowa are not on a par with Freshmen in the state university in the same commonwealth. This is in marked contrast with the findings of the analogous comparison already reported for California.

The second comparison is one afforded by certain materials gathered at the time the present writer was carrying on his investigation of the junior-college movement under subvention of the Commonwealth Fund. The data were assembled during 1921–22. At that time less progress had been made with tests of intelligence or college aptitude, or whatever it is that these tests measure. During and following the war, wide experimental use had been made in colleges and universities of the Army Alpha Test, and the distributions for a number of institutions were available in print or elsewhere. It therefore seemed practicable to administer this test to junior-college students, in order to have some evidence relative to their ability as compared with that of students in other higher institutions. During visits to junior colleges in many sections of the country Army Alpha scores were obtained for more than a thousand junior-college Freshmen. The percentage distribution of these scores looks very much like those for large mid-western state universities, for instance, those in Ohio and Minnesota. The medians were also not far from identical. When, however, this distribution was thrown against those for institutions like Oberlin and Yale, there was a remarkable difference in favor of institutions of the latter type.

The difference between the distributions for the state universities and for these private institutions results from the differences

[2] *Ibid.*, p. 349.

in procedures in selective admission followed in the two types of institutions represented. The state universities in the Middle West have typically admitted all who submit evidence of having graduated from an accredited high school, the only selective influence in addition to this being the inclusion of two years of mathematics and three or four years of English among the subjects offered for entrance. The devices used by certain institutions on private foundations, like Oberlin and Yale, in selecting students are so well known that there is no need of describing them here. Our interest is chiefly in the large proportion of less capable students admitted to the state universities and the serious problem of adapting the curriculum to the abilities and needs of these students.

If the question is raised as to whether such students should have open to them the opportunities of education on this level, it may be pointed out that, as compared with the general populace, even these less capable junior-college Freshmen represent a somewhat selected group. Moreover, we may judge from the trend of events that they will not be denied these opportunities, since, if one type of institution declines to accommodate them, another will spring up to look out for their needs. It is not for any individual institution to stem a tide which has been set up by fundamental social and economic forces. It is appropriate here to mention a factor influencing the growth of the junior college in California which is not often referred to, but which is one of the most potent of those that have fostered the movement in that state, namely, the demand for a place of training on the collegiate level for the scholastically less competent high-school graduates to whom the doors of most other estimable higher institutions of the state, including the state university, are closed. This factor of growth should be added to those set down in the opening paragraphs of this article.

EFFORTS AT CURRICULUM ADJUSTMENT IN THE JUNIOR COLLEGES OF THE STATE

Having admitted these students with the less satisfactory high-school records, that is, the "non-recommended" high-school graduates, the junior college is faced with the problem of providing some type of training program for them, and at the same time safe-

guarding accredited relationships with the other higher institutions to which their graduates may plan to transfer. This has been accomplished in a variety of ways, all of which take some cognizance of the plan at the University of California of advancing the student to the Senior Division by means of a "Junior Certificate," which he receives on the completion of certain required work of a stated minimum standard. By this means the university continues *within* the institution the selective processes begun through the plan of admission already described. Certain of the plans of junior colleges in providing for the recommended or non-recommended graduates of high schools will shortly be described, but not until data have been presented to indicate the proportions of "recommended" and "non-recommended" graduates, and the proportions in which these two groups of students enter the junior college.

When a large group of Seniors in a number of representative high schools was studied with respect to the numbers of recommended units they had to their credit at the end of the four-year high-school period, it was found that of 1,422, 442 would have qualified for recommendation if the standard had been set in all cases at fifteen units of work with marks of "A" or "B." On the same basis, 980, or practically two-thirds of the students would have failed of recommendation. The additional statement should be made that of this larger group of 980 students, 134 earned less than five recommended units, 378 earned five or more but less than ten, and the remaining 468 earned ten or more but less than fifteen. Even if "recommendation" were set at twelve units of work of "A" or "B" grade, as is frequently the case in the junior colleges, the proportion of non-recommended high-school Seniors would be very large.

Another group of students considered with respect to "recommendation" were those entering seven representative junior colleges as first-year students. Of 936 entering students, 482, or well over half, would have been "non-recommended" if fifteen units of "A" and "B" grade had been required. If twelve such units had been required the proportion would have been smaller, but not far from a third of all entrants.

In admitting students to the junior colleges of California, it is

the prevailing practice to classify them into two groups with the distinction of "recommendation" or "non-recommendation." More frequently than otherwise, the former are designated as "certificate" or "C" students and the latter as "diploma" or "D" students. Other designations are also used, as "Status I" and "Status II." The term "certificate" refers to the evidence of acceptability in the Senior Division of the University of California or elsewhere.

One of the most elaborate plans of curriculum organization in the junior colleges of California for the school year to which the present description applies was that in Long Beach, in a junior college which was not established until the autumn of 1927, and which was at once swamped with an unexpected number of students. According to this plan, which was first put in operation during the second semester of that year, there were three "types" of curriculums, the "certificate" curriculum, the "diploma" curriculum, and the "transfer" curriculum. It was stated that the first of these admits to junior standing in the four-year college or university. For admission to this curriculum the candidate must have been graduated from an accredited high school, must have received recommending grades in at least twelve standard units, and must have been certified by the principal of the high school as having reasonable prospects of success in college work. The second, the "diploma" curriculum, was described as offering vocational, academic, and cultural courses. It was "open to all high-school graduates, recommended and non-recommended. It was intended for those who desire further educational training but who do not care to complete a four-year professional course." The "transfer" curriculum was described as giving "opportunity for students, if they lack sufficient recommended high-school credits, to make up deficiencies so that they may be admitted to the certificate courses."

To state that there were three types of curriculums in the Long Beach arrangement does not provide a full description of the plan of organization. Actually twenty curriculums were offered, as there were nine different certificate curriculums, ten diploma curriculums, and one transfer curriculum. The certificate curriculums were in "commerce and business administration," "pre-engineering," "pre-legal," "liberal arts A," "liberal arts B," "liberal arts

C," liberal arts S," "pre-medical," and "pre-teacher training." The diploma curriculums were in "practical architecture," "art," "general business," "secretarial," "practical engineering," "home economics," "journalism," "liberal arts," "music," and "nursing."

In the Santa Ana Junior College three curriculums were provided, the "certificate," the "diploma," and the "vocational," the first of which was open to recommended high-school graduates only. By a system of classification of students as "credit," "provisional," and "restricted," provision was made for transfer from one curriculum to another.

In the Riverside Junior College students were segregated into two groups, the first comprising those who present at least twelve high-school units of recommending grade and the second those who present less. The bulletin for this junior college stated that students in the second group might elect such courses

> as their high-school recommendations warrant; otherwise they are restricted to subjects to be known as Q.E.D. courses. These Q.E.D. courses confer credit leading to the diploma of graduation. . . . . Q.E.D. units of recommending grade may be used to satisfy deficiencies in high-school recommendations. . . . .

These courses are open to students in Group I, but do not confer college credit transferable to other institutions.

In the Fullerton Junior College three curriculums were listed, these corresponding to the curriculums in the Santa Ana Junior College. However, the arrangement included a curriculum prescribed for non-recommended high-school graduates who were seeking admisison to the certificate curriculum. The regulations for transfer from this to the certificate curriculum included a grade-point requirement and recommendation by a committee on scholarship.

The Pasadena Junior College, according to the bulletin for the year 1927–28, offered three curriculums, namely, "certificate," "diploma," and "vocational," after the manner of two other plans previously described. There was also a procedure for transferring from the "diploma" or "vocational" curriculum to the "certificate" curriculum, a procedure by which junior-college work of certain qualities is substituted for the deficiencies in entrance requirements for "certificate" curriculum standing. The effect of this

plan, as of certain others in operation in junior colleges, is to lengthen the period of attendance during which the junior-college student non-recommended at entrance qualifies on the requirements for admission to the senior division of the four-year college or university.

The individual plans described are those of rather larger junior colleges in the state, junior colleges that have a student body of sufficient size to warrant differentiation in the offering. Junior colleges with small enrolments must be satisfied with merely classifying the students into the two groups, enrolling them in the same courses or classes, and providing for the transfer of the individual student from "D" to "C" classification when his record warrants.

One who inquires into these arrangements is impressed with the near-unanimity with which the junior colleges of the state set up the machinery for transfer from the lower to the higher status. This practice is to be commended rather than condemned. The frequency of provision for transfer is evidence that considerable proportions of students entering as non-recommended high-school graduates, and, therefore, as "diploma" students, aspire to transfer to the certificate group, which means that in all likelihood they also look forward to attendance upon and completion of the four-year college or university. The writer has encountered no study of the proportionate frequency with which students make the transfer, and with what success as measured by performance in colleges and universities after completing the work of the junior college. This would be an interesting problem for special investigation, the findings of which should be helpful in arriving at an adequate curriculum policy for these institutions.

It remains to report the results of an analysis of the courses offered during 1927–28, and the enrolments in these courses in the junior colleges for which it was possible to secure complete data. For the purpose of these analyses the institutions were separated into two groups corresponding to their statutory classification, that is, district junior colleges and junior-college departments of union high-school districts. In general, the district junior colleges are

larger, when measured by total enrolments. This fact and the more generous program of state aid to them makes for a larger curriculum offering, with more differentiation for the different types of students. Also for the purpose of these analyses the courses are classified into two groups, to be designated as "C" and "D" courses. "C" courses include all "certificate" courses and "D" courses all non-certificate courses, that is "diploma" courses, "vocational courses," "transfer" courses, and the like. The aims of these analyses were two: first, to note the proportions of courses of these two types, and, second, to note the proportionate enrolment in them.

As might be expected, almost all junior colleges of both district and department types make some offering of the "C" classification in all the major fields of instruction into which the total offering was divided, namely, English, foreign language, mathematics, physical science, biological science, social subjects (including history), philosophy and psychology, fine arts (including music and the graphic and related arts), practical and industrial arts (including industrial arts, agriculture, home economics, and commerce), and physical education. The numbers of different junior colleges making some offering of the "D" type are not large as compared with the total number of junior colleges. In only one field did the number exceed half the junior colleges, and that was in the practical and industrial arts. The proportions are even smaller for the junior-college departments than for the district junior colleges.

When the data available were turned into percentages by dividing the number of semester-hours in each subject field by the total offering, the proportions of "D" courses were even more discouraging. For example, for district junior colleges, 10.6 per cent of the total offering was in "C" courses in English, while there was only 0.4 per cent in "D" courses in the same subject field. For only one subject field was the proportion of "D" courses comparable with that of "C" courses. This was in practical and industrial arts, for which the percentage of "D" courses was 10.5. In no academic field did the percentage exceed 1.2. Only 15.0 per cent of the *total* offering in these district junior colleges was in "D" courses, a pro-

portion lagging far behind the percentage of "D" students. The situation in the junior-college departments in this regard was even less satisfactory, as "D" courses for this group of institutions

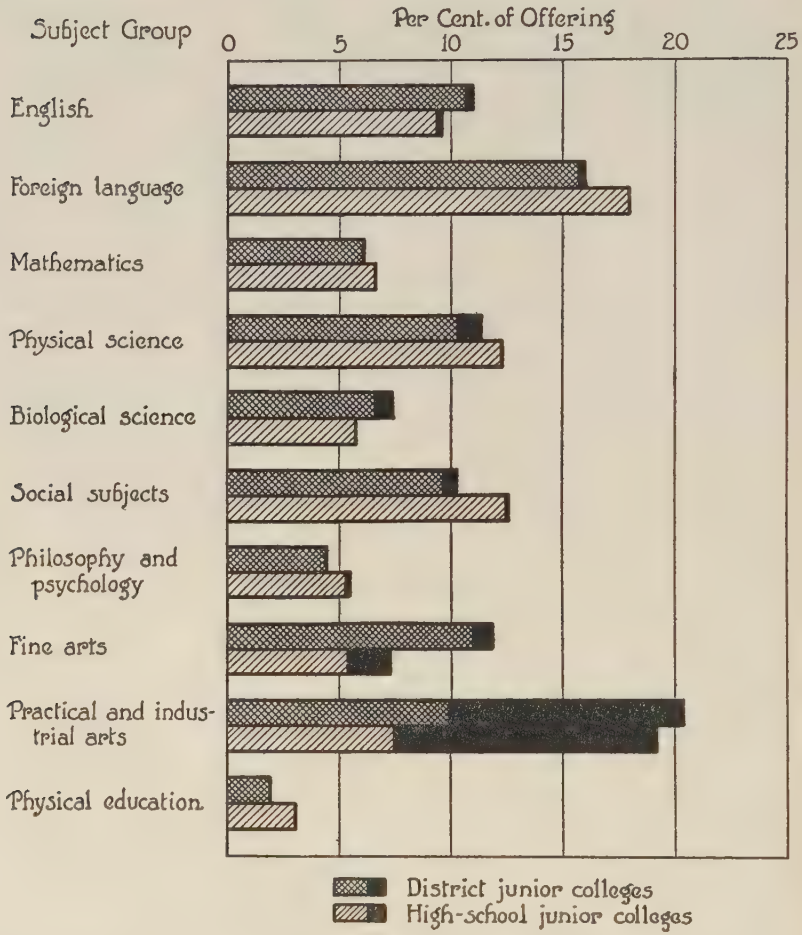

FIG. 1.—Percentages of the total offering of "C" and "D" courses in each subject group in the two types of junior colleges. Black represents the percentage of "D" courses. (Fig. 26 in *Secondary Education in California: Report of a Preliminary Survey*, p. 90. Sacramento: State Department of Education, 1929.)

made up but 14.3 per cent of the total offering, 11.7 per cent being found in the practical and industrial arts.

Conclusions from the percentage analysis of *enrolments* in these "C" and "D" courses in the several subject fields differ from

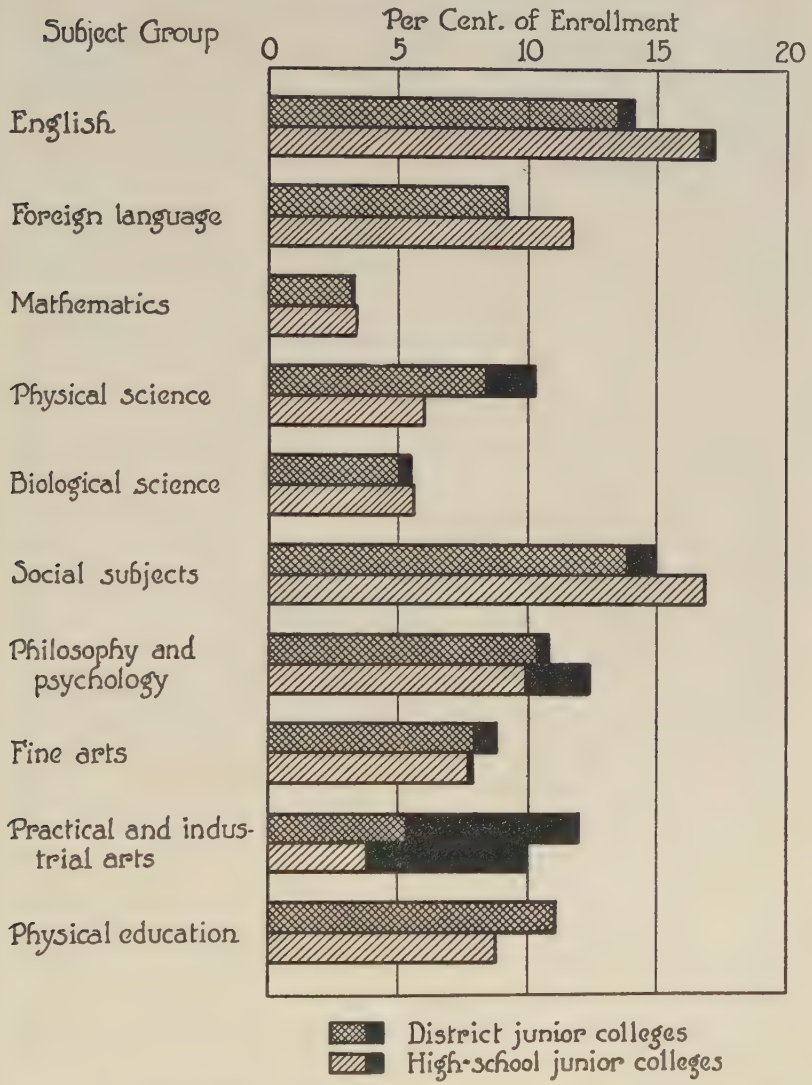

FIG. 2.—Percentages of total enrolments in the two types of junior colleges in "C" and "D" courses. Black represents the percentage of enrolment in "D" courses. (Fig. 27 in *Secondary Education in California: Report of a Preliminary Survey*, p. 92. Sacramento: State Department of Education, 1929.)

those already drawn in negligible respects only. The outstanding facts are that only small proportions of the students are enrolled in the "D" courses offered, and the largest proportions are found the courses in the field of practical and industrial arts. With respect to enrolment, as with respect to proportions of the offering, curriculum adjustment lags far behind the proportions which non-recommended entrants are of all entrants.

EVALUATIVE COMMENT

On the positive side we may say for the junior colleges of California, what has not yet been pointed out in this article, that certain of them are mapping out a broad and rich program not restricted to the narrow range of work often characteristic of the program in the first two years of four-year colleges and universities. Second, there has been a beginning toward setting up differentiated opportunities for students of differing competence. Although it is not unlikely that the basis or level of differentiation made may require modification, some sort of adjustment for students of the widely differing abilities represented must be made. The "C" and "D" division, imposed from without, provides at least a starting point by emphasizing the need for differentiated programs.

On the negative side we may deplore chiefly the prevalent (but not quite universal) lack of differentiation in the liberal or cultural elements of the training program. Such differentiation as is provided is dominantly in the practical and industrial arts, as if the interests and training of the less competent students should be solely or largely of an occupational character. Certainly there is no tenable dichotomy of junior-college students that would train a portion of them by means of strictly academic programs and the remainder by practical-arts programs to the exclusion of liberalizing academic elements. The junior colleges of California and other states have an important responsibility here. Joined with it is the admitted inadequacy of the present offering in these years for even the more highly selected college-going student, which opens up the whole question of the appropriate liberalizing elements of training for *all* students on this educational level.

Even the relatively large proportion of the offering in the field

designated as "practical and industrial arts" cannot be accepted as a guaranty that adequate facilities for vocational training on the semiprofessional level are at hand in these junior colleges. In large part the offering has been taken over from the high-school courses below, many of which are not strictly vocational and not well adapted to the junior-college level. It is with the semiprofessions that we are here concerned, occupations the training for which can be completed on the level of the junior college. The basic studies that will definitely identify these occupations, either in California or elsewhere, are still to be made, and following their identification must come the investigations upon which the courses and curriculums in preparation for them should be based.

Assuming that liberalizing and occupational programs can be mapped out for less competent students, there is still the problem of inducing them to avail themselves of these offerings. The traditions are opposed to aspiring to less than the complete college or the full professional curriculum extending four or more years above the level of high-school graduation. School-going and college-going traditions are, if anything, more influential in California than elsewhere in the country. It will require a highly constructive and influential program of guidance to bring about the proper distribution of students after all desirable changes in the offering have been effected.

It is an easy and trite thing to assail the curriculums of any school or system of schools and to complain of them as inadequate. The writer hopes that he will not be understood as having attempted here a merely negative attack. In pointing out what seem to be the limitations of the offering in the junior colleges of California, he hopes to stimulate further inquiry and greater constructive effort in this most important phase of junior-college reorganization. And, after all, it must be admitted that development of the curriculum on the junior-college level in that state is more advanced than in any other state or section of the country.

CHAPTER VI

THE JUNIOR-COLLEGE CURRICULUM IN COLLEGES AND UNIVERSITIES

FLOYD W. REEVES

This discussion of the junior-college curriculum in colleges and universities is based upon a study of one hundred institutions of higher learning. Ten of these institutions are state universites, ten are large endowed universities under private or municipal control, and eighty are independent colleges of liberal arts.[1] The data for the report were obtained from the catalogues of the institutions investigated. In addition personal visits were made to forty of the independent colleges of liberal arts.

AIMS OF THE JUNIOR COLLEGE IN FOUR-YEAR INSTITUTIONS

The writer is of the opinion that every institution of higher learning should set up definite aims and objectives as bases for the development of curriculums, and that a statement of these aims should be included in the college catalogue. Only a few of the institutions studied, however, have adopted this policy. A careful examination of the contents of the catalogues of one hundred colleges and universities shows that less than one-half of them include even a brief statement of the aims and purposes of the institution and that a still smaller number make specific reference to the aims of the work of the first two years of the college course as distinct from those of the entire four-year program.

Those institutions which have included in their catalogues statements of aims have frequently given expression to these aims in somewhat vague terms, such as, "The purpose of the institution

[1] The state universities include California, Illinois, Iowa, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Oregon, and Washington; the endowed universities include Boston, Buffalo, Columbia, Harvard, New York, Northwestern, Pittsburgh, Princeton, Stanford, and Washington University in St. Louis; the eighty independent colleges are widely distributed over the country, and include only the better institutions.

is to provide the student with a cultural education." Some of the institutions with denominational affiliations stress the religious influence in their statements of aims. The following is typical of the stated aims of such institutions: "The purpose of the college is to provide a religious atmosphere in which the student may profitably spend four years in acquiring a liberal education."

Some institutions have attempted to differentiate the aims of the Freshman and Sophomore years from those of the Junior and Senior years. Occidental College and Transylvania College are typical of such institutions. The catalogue of Occidental College contains the following statement of aims:

> The regular undergraduate course extends normally through four academic years and leads to the degree of Bachelor of Arts. The first two years of the course are intended to provide a comprehensive but sound foundation in subjects such as English, Natural Science, Foreign Languages, Religion and Philosophy, a knowledge of the principles of which is generally considered essential to a liberal education. During the last two years of his course a student devotes himself largely to more intensified study in the particular major study of his choice.

The catalogue of Transylvania College emphasizes the distinction between junior-college and senior-college work in the following statement:

> The programs of study of the college curriculum are planned as far as possible to build in unified fashion upon the high school curriculum by continuing and supplementing it, to lay foundations in general culture by introductory or survey courses in varied fields, and to give opportunity for some specialization in the narrower field of the individual student's interest. To this end the programs of study are rather definitely divided into lower and upper divisional courses or into junior and senior college curricula.

The character of the work of the first two years of the college course at Georgetown College is expressed in the statement that "the college endeavors to complete, confirm, and extend the work of the high school by the courses of the Freshman and Sophomore years."

The preparatory function of the first two years of the four-year program offered at Western Maryland College is expressed in the following statement:

> Too great emphasis cannot be placed upon the importance of the character of the work done in the first two years in college. The foundations are here

laid for the success of the remaining two years of college work and for successful graduate work which follows. It is the purpose of Western Maryland College to place the very best and most experienced teachers in charge of freshman and sophomore classes, and to insist upon the maintenance of the highest standards of scholarship.

The secondary and preparatory functions of the first two years of the college course at the University of Washington are expressed in the statement that the aims of the work of these two years are "to contribute to a broad training in preparation for the advanced work of the upper division," and "to supplement the work of the high school." Other aims of the first two years of the college course are stated in the catalogues of Leland Stanford Junior University, the University of Minnesota, and the University of California. The catalogue of Stanford University states that the object of the Freshman and Sophomore years, constituting the lower division, "is to introduce the student to the fundamental fields of human interest, and to this end it requires the completion of certain studies during the first two years." The catalogue of the College of Science, Literature, and the Arts of the University of Minnesota states that it is expected that the courses of the junior-college division "will offer preparation for various vocations or will provide a general education for those who do not complete a longer course." The catalogue of the University of California states that the student is expected during the Freshman and Sophomore years to "make an effort to establish a basis for that breadth of culture which will give him a realization of the methods and results of some of the more important types of intellectual endeavor, and a mental perspective that will aid him in reaching sound judgment."

CURRICULUM OFFERINGS

A study of the catalogue offerings of one hundred colleges and universities shows that most of these institutions attempt to recognize by means of curriculum offerings the professional interests and needs of students enrolled in the Freshman and Sophomore years. The writer recognizes the fact that it is very difficult to draw a hard-and-fast distinction between professional and non-professional courses. In the present study all courses listed in the

various professional departments were considered as professional subjects and all courses listed in the recognized academic arts and science departments, even though their content might have some professional bearing, were considered as non-professional. On the basis of this classification, eighty-four of the institutions either offer courses of a professional nature in the Freshman and Sophomore years or advertise for these years preprofessional curriculums. Of the sixteen institutions which offer neither professional nor preprofessional work for students of the first two years, fourteen are independent colleges of liberal arts and two are privately endowed universities. All of the state universities offer in some departments professional subject matter for Freshmen and Sophomores.

Thirty-three of the one hundred four-year institutions offer two-year curriculums for students who do not plan to continue their training beyond the Sophomore year. Twenty-four of these institutions are independent colleges of liberal arts and nine are universities. In the twenty-four independent colleges, all of the two-year curriculums are of a vocational or preprofessional nature. The same is true of the two-year curriculums offered in five of the nine universities. The other four offer both vocational and preprofessional two-year curriculums and two-year curriculums designed to provide terminal education of a general nature for those students who do not plan to proceed with their education beyond the Sophomore year.

A relatively large percentage of the institutions provide either two-year curriculums or four-year curriculums which have professional subject matter of various types in the Freshman and Sophomore years. Data in support of this point are presented in Table I. It will be observed from the last column of this table that in the fields of agriculture, architecture, dentistry, nursing, and pharmacy professional subject matter for Freshmen and Sophomores is offered by less than 10 per cent of the institutions. One reason for this low percentage is that very few of the independent colleges of liberal arts provide curriculums of any type in the fields mentioned. Among the universities which do provide such curriculums, however, the most frequent practice is to include some professional sub-

ject matter in the program of the first two years. In contrast to the situation in agriculture, architecture, dentistry, nursing, and pharmacy, it will be noted that in the fields of business administration, education, engineering, journalism, and theology and social service, 25 per cent or more than 25 per cent of the institutions offer professional subject matter to Freshman and Sophomore students. In one of these fields, education, 58 per cent of the institutions provide professional courses for Freshmen and Sophomores.

TABLE I

PERCENTAGE OF INSTITUTIONS WHICH PROVIDE CURRICULUMS WITH PROFESSIONAL SUBJECT MATTER IN THE FRESHMAN AND SOPHOMORE YEARS

Subject-Matter Field	Percentage of 80 Independent Colleges	Percentage of 10 Privately Endowed Universities	Percentage of 10 State Universities	Percentage of 100 Institutions
Agriculture	0.0	0.0	50.0	5.0
Architecture	0.0	30.0	10.0	4.0
Business administration	35.0	50.0	50.0	38.0
Dentistry	0.0	30.0	50.0	8.0
Education	62.5	20.0	60.0	58.0
Engineering	32.5	70.0	90.0	42.0
Journalism	22.5	20.0	60.0	26.0
Nursing	5.0	10.0	40.0	9.0
Pharmacy	5.0	30.0	10.0	8.0
Theology and social service	30.0	0.0	10.0	25.0

In interpreting these data it should be remembered that the percentages are based upon the total number of institutions examined and not upon the number which offer professional curriculums. Had the calculations been based upon the number of institutions offering professional curriculums of the respective types represented, rather than upon the total number of institutions investigated, all of the percentages would have been in excess of 50 per cent. In the fields of agriculture and pharmacy *all* of the institutions offering such work provide professional courses for Freshmen and Sophomores, while in the fields of education, engineering, and nursing more than 75 per cent of the institutions offering such work provide professional courses for such students.

Table II shows the percentage of institutions which advertise

for the Freshman and Sophomore years preprofessional curriculums which do not include professional subject matter.

It is interesting to note, in connection with the figures presented in the second and third columns of Table II, that in law and medicine 70 per cent of the endowed universities, as well as 70 per cent of the state universities, advertise preprofessional curriculums which do not include professional subjects. The percentage of the independent colleges of liberal arts advertising such curriculums

TABLE II

PERCENTAGE OF INSTITUTIONS WHICH ADVERTISE FOR THE FRESHMAN AND SOPHOMORE YEARS PREPROFESSIONAL CURRICULUMS WHICH DO NOT INCLUDE PROFESSIONAL SUBJECT MATTER

Subject-Matter Field	Percentage of 80 Independent Colleges	Percentage of 10 Endowed Universities	Percentage of 10 State Universities	Percentage of 100 Institutions
Agriculture	5.0	0.0	0.0	4.0
Architecture	0.0	10.0	0.0	1.0
Business administration	7.5	20.0	20.0	13.0
Dentistry	12.5	30.0	30.0	14.0
Education	0.0	20.0	20.0	5.0
Engineering	15.0	20.0	20.0	14.0
Journalism	5.0	30.0	20.0	9.0
Law	27.5	70.0	70.0	37.0
Medicine	65.0	70.0	70.0	68.0
Nursing	10.0	20.0	10.0	11.0
Theology and social service	0.0	30.0	30.0	3.0

for prospective medical students is only slightly smaller than the percentage of universities advertising such curriculums, although the percentage of institutions advertising preprofessional curriculums for prospective law students is less than one-half as great for the independent colleges of liberal arts as for the liberal arts colleges in universities.

The present trend with reference to curriculum changes may well be illustrated by the programs adopted this year by two eastern universities.

The following description of one of these programs appears in a recent catalogue of the University of Buffalo:

The College offers a variety of programs intended to serve the student who intends to spend a period varying from two to four years in liberal arts, thereupon transferring to some professional school. Definite curricula are set up,

the completion of which will admit to this university's schools of medicine, dentistry, law, business administration, and library science; and, with some possible modifications, they will admit to any such schools which allow entrance without an arts degree. In addition, courses are offered extending through two years, the completion of which will enable a student to transfer to an engineering college and secure advanced standing.

At Columbia College the work of the first two years is of the nature of exploratory courses. Upon the completion of the Sophomore year it is expected that the student will have gained a good general education of junior-college grade. The Freshman and Sophomore years are considered as years of orientation. Should the student not desire to continue his college training further, he will have accomplished a definite goal and should have acquired a training which will be helpful in making him an intelligent citizen.

THE JUNIOR-COLLEGE LINE OF CLEAVAGE

Koos,[2] in his comprehensive study of the junior-college completed seven years ago, traced the movement of the forces for reorganization as they are manifested in a number of the larger universities of the country. Specific reference was made to a line of cleavage which was noted between the Sophomore and Junior years in four-year institutions. Important characteristics of this movement mentioned by Koos were (1) the *name* given the unit, such as the "lower division," the "junior college," or the "junior division"; (2) separate administrative and advisory officers for the first two years of the four-year program; (3) separate statements of the aim and purpose of the lower division; (4) a different method of administering the curriculum; (5) continuity of the work of the first two years of college with that of the high school; and (6) a point set for the beginning of specialization.

With these characteristics in mind the writer analyzed the most recent catalogues of the institutions investigated and compared statements appearing in these catalogues with those of the same institutions for the school year 1921–22, in order that the later growth of the movement toward reorganization might be noted. This analysis shows, for the last seven years, a marked

[2] Leonard Vincent Koos, *The Junior College,* Research Publications of the University of Minnesota (Minneapolis: University of Minnesota, May, 1924).

tendency for institutions to separate more completely the work of the Freshman and Sophomore years from that of the Junior and Senior years. This line of cleavage, as evidenced by one or more of the characteristics mentioned by Koos, now operates in 55 per cent of the independent colleges, in 80 per cent of the endowed universities, and in 90 per cent of the state universities. The characteristics mentioned concerning which changes are in evidence most frequently are two in number: (1) the tendency to denominate the lower unit with a specific designation; and (2) the tendency to concentrate major and minor work in the upper years of the college course. An examination of catalogues shows that two of the ten endowed universities, six of the ten state universities, and ten of the eighty independent colleges have named this lower unit with a specific designation. Of this group of eighteen institutions which have given specific names to the Freshman and Sophomore years, eight have designated these years as the "lower division," eight others have designated them as the "junior college," and two have designated them as the "junior division." Recognition of a line of cleavage between the Sophomore and Junior years, by limiting the major and minor requirements in the field of specialization to work taken during the Junior and Senior years, has been made in 20 per cent of the independent colleges of liberal arts, in 50 per cent of the endowed universities, and in 70 per cent of the state universities. Among the institutions which have not limited the major and minor requirements to the work of the Junior and Senior years, the major variation from this practice is the requirement of a considerable number of these institutions that at least one course in the major field be taken throughout the Sophomore year.

JUNIOR-COLLEGE REQUIREMENTS

A study of the subject-matter requirements of colleges and universities, as stated in the catalogues of one hundred institutions, provides information concerning the amount of prescribed work and the subjects in which such prescriptions operate.

The first point noted relates to the credit requirements in the Freshman and Sophomore years. The median number of semester-hours required in specific courses is fourteen in the independent

colleges, fifteen in the liberal arts colleges of the endowed universities, and ten in the liberal arts colleges of the state universities. This means that on the average from one-fourth to one-sixth of the work of the junior college is definitely prescribed in terms of specific courses. The requirement in specific groups of subjects tends to be much greater than the requirement in specific courses. The median requirement within specific groups of subjects is fifty semester-hours in the independent colleges, thirty-five semester-hours in the liberal arts colleges of the endowed universities, and thirty-four semester-hours in the liberal arts colleges of the state universities. A large variation from these medians exists among institutions. The range in semester-hours required within specific groups of subjects is from ten to sixty for the independent colleges of liberal arts, from none to forty-two for the liberal arts colleges of the endowed universities, and from ten to sixty for the liberal arts colleges of the state universities. The subjects required and the number of institutions requiring these subjects are presented in Table III. Using for illustrative purposes data relating to the field of English, this table is read as follows: sixty-four independent colleges of liberal arts, seven colleges of liberal arts in endowed universities, and seven colleges of liberal arts in state universities (making a total of seventy-eight colleges of liberal arts out of one hundred investigated) require English of all students during their Freshman or Sophomore years.

The second point noted in connection with junior-college requirements is an increasing recognition of the knowledge which students at the junior-college level already possess in specific subject-matter fields. An excellent illustration of this point is that to which previous reference has been made in the field of English. A few years ago, in setting up requirements in English practically no recognition was given to the knowledge which students possessed when they entered college. Today twenty-two colleges of liberal arts do not require course work in English of *all* students. All of these colleges however do have requirements in English for some students. These requirements are based upon the knowledge and ability of students as measured by English tests or by grades earned in the first course in English taken during the Freshman year.

The application of this plan at some institutions results in a requirement that students take an English course without credit. At other institutions some entering students are excused from the first course in English, and in some instances from both the first and second courses, and are permitted to take advanced work earlier in their programs.

The number of institutions which, in setting up their requirements, recognize the knowledge and ability of students in fields

TABLE III

SUBJECTS REQUIRED OF ALL STUDENTS IN FRESHMAN AND SOPHOMORE YEARS AT EIGHTY INDEPENDENT COLLEGES OF LIBERAL ARTS, TEN COLLEGES OF LIBERAL ARTS IN ENDOWED UNIVERSITIES, AND TEN COLLEGES OF LIBERAL ARTS IN STATE UNIVERSITIES

SUBJECT	NUMBER OF COLLEGES REQUIRING SUBJECTS LISTED			
	Independent Colleges	Colleges in Endowed Universities	Colleges in State Universities	Total Colleges
English	64	7	7	78
Science	50	4	4	58
Foreign language	48	5	4	57
Physical education	38	3	6	47
Social science	34	4	4	42
Bible or religion	30	1	0	31
Hygiene	20	1	2	23
History	16	2	2	20
Mathematics	18	1	1	20
Speech	10	0	1	11
Orientation course	4	1	1	6
Psychology	2	1	0	3
Fine arts	2	0	0	2
Philosophy	0	1	1	2

other than English, is limited. However, the tendency to recognize such knowledge and ability is now beginning to appear in other fields. As an example of this, Swarthmore College has substituted for quantitative requirements a qualitative standard of attainment in those subjects considered essential to a liberal education. Students who pass examinations set to test their proficiency in prescribed subjects are excused from specifically required courses and are allowed to devote the hours thus released to more advanced work. The effect of this change is to afford greater flexibility to the work of the first two years of the college course.

A third point noted with reference to junior-college requirements is closely related to the one just mentioned of basing requirements upon the knowledge and ability of students. There appears to be an increasing tendency upon the part of institutions to base junior-college requirements in some of the subject-matter fields upon the number of high-school units presented for entrance. For many years this has been a common practice in the field of foreign languages. Only recently, however, has the plan been adopted for other subjects. An examination of the latest catalogues of the one hundred colleges and universities investigated shows that in one or more fields, in addition to foreign languages, 50 per cent of these institutions now base their entrance requirements upon the number of entrance units submitted. This practice appears to be adhered to much more frequently in the natural sciences than in either English language and literature or the social sciences.

Possibly one of the best examples of a well-co-ordinated high-school and junior-college program is that of the University of Washington. The work of the lower division of the University comprises the studies of the Freshman and Sophomore years. A student is enrolled in the lower division until he has completed all required courses of the first two college years and has attained a minimum of ninety term credits. The institution has set up ten requirements for the completion of the lower division. Five of the ten requirements are based upon the number of entrance units submitted by the student in specific subject-matter fields, one is based upon marks received in an examination in a subject-matter field, and the other four are in no way related either to the high-school units accepted for entrance or to marks received on examinations in subject-matter fields. The ten requirements are as follows: (1) three quarter courses in United States history with complete exemption from this requirement for students who have had in high school one year of United States history or one year in United States history and civics combined; (2) a second course in history with exemption for students who have credit for a second year of high-school history; (3) ten term-hour credits in English with exemption based entirely upon ability to pass an English examination; (4) a course in ancient life and literature or a course in an-

cient language with exemption for students who have had as many as three years of ancient language in high school or three years in high school and college; (5) ten term-hour credits in physical science with exemption for students who have received credit for one year of physical science in high school; (6) ten term-hour credits in biological science with exemption for students who have received credit for one year of biological science in high school; (7) ten term-hour credits in social science with no exemption for high-school work; (8) five term-hour credits in psychology with no exemption for high-school work; (9) five term-hour credits in philosophy with no exemption for high-school work; (10) a course in military science or in physical education with no exemption for high-school work.

A fourth point investigated with reference to junior-college requirements relates to the practice of granting college credits for excess high-school units. Of the one hundred institutions investigated, the catalogues of thirty state that students may use excess high-school credits to meet college requirements for graduation. Of these thirty institutions, twenty-six are independent colleges of liberal arts, two are endowed universities, and two are state universities. More than one-half of the institutions allowing college credit for excess high-school units limit such credit to foreign languages. The method employed most frequently for checking the value of such high-school units is that of examination in the subjects in which the student makes application for excess credit.

TYPES OF REORGANIZATION OF CURRICULUMS

Examples selected from two of the larger universities may serve to illustrate the types of reorganization of curriculums now under way in a relatively large number of institutions.

The University of Illinois has recently made marked changes in the requirements for Freshmen and Sophomores. These changes will go into operation next year. Important objectives and requirements of the new plan are as follows: (1) a reasonable facility with language including the ability to write the mother-tongue and to read at least one foreign language, ancient or modern; (2) a diversified background, to be completed before the Senior year, of

elementary instruction in the traditional fields of the arts, sciences, and social sciences; (3) a concentration of interest, following the work of the Freshman year, in some one selected subject supplemented by work in one or two closely allied fields of learning; (4) a growth in maturity as a result of the requirement that during the last two years of the college course a certain minimum of credit be obtained in courses not open to Freshmen or Sophomores; (5) a liberal opportunity to select preprofessional courses offered by other colleges and schools of the university. Six semester-hours of rhetoric is a university requirement, although under the new plan incoming students with exceptional preparation may be excused from the formal course work in rhetoric by demonstrating their abilities through "proficiency examinations" offered during the first two weeks of each semester. The foreign-language requirement is a reading knowledge of some language taught in the university, equivalent to that obtainable in four semester college courses. For the student who desires to satisfy this requirement by taking formal courses, high-school credits are evaluated in terms of university credits. However, students have the option of taking a "proficiency examination" as in the case of rhetoric. In conformity with the requirement of a diversified background of elementary studies, students are required to present at least fifteen semester-hours selected from the offerings of three different departments on the arts side of the college and a similar number from three different departments on the science side.

The new curriculum developed at the University of Buffalo represents a radical departure from former practices. As stated in the catalogue,

> The new curriculum, affecting those who entered in September, 1925 and after, falls into two main parts, regarded as practically separate units: (1) the introductory courses of freshman and sophomore years, which it is planned shall lead up to (2) the advanced work of junior and senior years. Both the aims and methods of these divisions are different, since the policy of the college entails the inauguration as soon as possible of informal and individual work on the part of *all* upperclassmen.

In most instances candidates for the degree of Bachelor of Arts are required to complete the following work before the beginning of their Junior year: (1) English, twelve semester-hours; (2) botany,

six semester-hours; (3) additional work in laboratory science, from eight to ten semester-hours; (4) two social sciences selected from the fields of economics, history, sociology, political science, and psychology, to total twelve semester-hours; (5) hygiene, two semester-hours; (6) physical education, required without credit; (7) a modern foreign language. In explanation of the requirement of a modern foreign language, the catalogue states:

> The modern language requirement is not expressed in terms of hours or courses but rather in the acquirement of what the faculty deems is in each individual case a satisfactory knowledge of the language. All candidates for the B.A. degree are required to satisfy a standard of attainment in a modern language, preferably French or German. The requirement is to be met by any one of the following methods: (*a*) Four years of the language in a secondary school, which need not, unless the student chooses, be followed by any college language; (*b*) two or three years in high school and a continuation of the same language for one year in college; (*c*) two years in college of a language not previously studied; (*d*) by special tests. The registrar will make arrangements with the student, in ample time, regarding his choice of these options.

PROVISIONS FOR THE DIVERSE NEEDS OF STUDENTS BY MEANS OF VARIATION IN COURSE CONTENT

Institutions frequently attempt to meet the needs of students presenting different numbers of high-school units in a particular field by a variation in the content of the subject matter included in the course. In the case of foreign languages, it is worthy of note that all of the one hundred institutions investigated provide that students with two or more than two high-school credits in a foreign language do not enter the same classes as those attended by students without such language credits. However, only a relatively few of these colleges and universities have a similar provision for subjects other than foreign languages. As an example of this practice in other subjects, a few institutions place students who have had no high-school physics or chemistry in different sections from those in which they place students who have had high-school physics or chemistry, the content of the courses provided differing for the two groups. The number of institutions having such a plan for various subjects is as follows: chemistry, eighteen; mathematics, thirteen; physics, ten; biology, six; English, two; social science, two; accounting, two. More than 80 per cent of the institutions do not

attempt to co-ordinate the high school and college work in fields other than foreign languages by sectioning students upon the basis of high-school training. An excellent example of this lack of co-ordination may be observed in the social-science requirement of one of the large privately endowed universities. At this institution students may present for entrance from one to seven high-school units in history and social science. Those who have had seven years of high-school work in these fields are required to take courses with those who have had but one year of high-school history and no course in any other social science. A similar example may be mentioned in the field of mathematics. At one of the state universities, the mathematics requirement for entrance is one year of algebra, although students are permitted to present for entrance as many as four units of mathematics if they care to do so. At this institution during the Freshman year, students with one, two, three, and four years, respectively, of high-school mathematics all take the same mathematics course.

As an example of the method employed by some institutions to obtain greater co-ordination of high-school and college work, the plan used by a small independent college of liberal arts is worthy of mention since it is typical of the plans used by a small but increasing number of institutions. In elementary chemistry, three laboratory periods each week are required of all students who have not had high-school chemistry, although this number is reduced to two laboratory periods each week for students who have had high-school chemistry with a corresponding reduction in the amount of credit granted. A similar plan operates in accounting. One laboratory period each week is required of accounting students who have had high-school bookkeeping, although two periods each week are required of those who have had no bookkeeeping in high school.

Not all institutions which vary courses to meet the diverse needs of students follow the plan just described. In some instances subject matter is varied primarily to meet the professional needs of students with the result that courses are organized in a number of fields for groups of students with special interests. Thus, the first year of biological science may be given in different sections under such designations as general biology, biology for premedical students, etc.

At one of the state universities two elementary courses are offered in physics. One is designed for those who desire a course only for general information, while the other is for those who desire more thorough training. The first course is required of students in agriculture, and will also meet the requirements of the first course for medical students. The second course is open only to those who have had trigonometry.

One of the larger privately endowed universities, in practically all of the sciences, including mathematics, has special elementary courses for engineers, special courses for those who plan to major in the particular science field, and special courses of a general informational type for students who plan to major in other fields. Variations of this type in the content of Freshman courses are found in one or more departments of all of the state universities, in one or more departments of five of the ten endowed universities, and in one or more departments of six of the eighty independent colleges of liberal arts. Provisions of this type occur more frequently in chemistry, physics, mathematics, and the biological sciences than they do in other subjects.

ORIENTATION COURSES

A comparison of the catalogues of 1918–19 with those of 1928–29 shows that the so-called "orientation course," designed to orient the student to college life, has developed during the last decade in a considerable number of colleges and universities. In 1918–19, no one of the institutions studied offered a course of this type. In 1928–29, such courses were offered by 22 per cent of the independent colleges of liberal arts, by 30 per cent of the endowed universities, and by 80 per cent of the state universities. In the cases of all but three of these institutions, all Freshmen of the college of liberal arts are now required to take the orientation courses. Some of the universities also require Freshmen of colleges other than the college of liberal arts to take the orientation course offered by the college of liberal arts. Other universities require Freshmen of some of the professional schools and colleges to take special orientation courses designed particularly to meet the needs of the professional groups. Of the total of twenty-nine institutions which offer orien-

tation courses, nine give such courses in connection with Freshman Week. Of the other twenty institutions, nineteen offer either semester or quarter orientation courses, while one offers a year course. Most of the semester or quarter orientation courses give only one hour of college credit, although a few give no credit and some give two hours of credit. The institution offering a year course gives six semester-hours of credit for this course.

The content of the orientation courses varies somewhat among colleges and universities. This may be shown by a brief description of the courses offered at a few typical institutions. The University of Redlands offers in the education department an orientation course entitled "Introduction to College Problems." This course is elective in the Freshman year and carries two hours of credit. Marietta College offers a course in "Fundamentals of College Life." This course, which carries no credit but is required of all Freshmen during the first semester of their college work, involves occasional lectures and some collateral reading. At Olivet College the dean of women gives a course of Freshman lectures required of all the young women entering the Freshman class. The stated purpose of this course is to assist the students to become adjusted to their new surroundings and to become acquainted with their new duties, responsibilities, and opportunities.

The University of Washington offers, in two sections, a course in "Introduction to College Study." The catalogue description of the first section of this course follows:

> A special orientation course is offered for non-English speaking students who are found to need special training before continuing with a full student load in the University. To a great extent those who are to enroll in this course are chosen on the basis of the results of the entrance examinations required by the registrar. However, the course is open to all students that feel the need of special training. The course includes much drill in pronunciation, writing, reading, lecturing, methods of study, etc. Special emphasis is laid upon the importance of orientation of the individual to fit properly into American college life. In this course a complete diagnosis is undertaken to determine each students' particular difficulty.

This is a five-hour course not counting toward graduation but which is equivalent to a five-credit course in the student's schedule.

The catalogue statement of the second section of this course,

designed for students familiar with the English language, reads as follows:

> This course is given for students who feel that they do not have a sufficient knowledge of the proper methods of studying in college. Section II is a five hour course, not counting toward graduation, but which is recorded as a matter of determining schedule and for showing work done in case a student transfers to other universities or colleges. . . . . For students who have been dropped from the University because of scholastic difficulties, this course is an avenue of approach for reinstatement at the discretion of the Board of Deans, if a satisfactory record has been established therein. It has been so arranged as to give the student methods of reading and study, preliminary survey of assignments, taking notes, briefing surveys for reviews and examinations, analysis of discussion, definite plans for meeting examination, etc.

SURVEY COURSES

The widespread development of general survey courses in the lower divisions of colleges and universities is, in my judgment, the most significant trend discernible during recent years in connection with the junior-college curriculum. Relatively few courses of this nature were offered a decade ago. Now the practice has become widespread. Of the one hundred institutions investigated, 60 per cent of the independent colleges of liberal arts, 80 per cent of the endowed universities, and 80 per cent of the state universities offer in the Freshman and Sophomore years courses of the nature of general survey courses. The subjects in which such courses are offered most frequently, in the order of their frequency, are as follows: biological science, art, social science, history of civilization, natural science, literature, mathematics, and education. More than one-half of the general survey courses appear to be modeled after one or another of the following courses: (*a*) "Social and Economic Institutions" at Amherst; (*b*) "Introduction to Contemporary Civilization" at Columbia; (*c*) "Evolution" at Dartmouth; (*d*) "The Nature of the World and Man" at the University of Chicago.

SUMMARY STATEMENT

Few institutions in their respective catalogues set forth their aims and purposes in terms which in any way approach a satisfactory statement. This is indeed unfortunate since definite aims are needed as bases for the development of curriculums. A relatively

large percentage of the institutions offer professional or preprofessional curriculums of one type or another for junior-college students in the college of liberal arts. There appears to be a tendency for many institutions to separate more completely the work of the Freshman and Sophomore years from that of the Junior and Senior years. A constantly increasing number of institutions emphasize the line of cleavage between the Sophomore and the Junior years by some designation such as the "lower division" and "upper division," or the "junior division" and "senior division," or the "junior college" and "senior college." Increasing recognition is being given to the ability of students to do successful work in specific subject-matter fields. More frequently than was formerly the case, requirements are being based upon courses completed in high school or upon the results of objective tests in subject-matter fields. Thirty per cent of the institutions now allow college credits for excess high-school units with the result that students having such excess units are free to devote more of their time than would otherwise be possible to courses in which they may be particularly interested. Another means of co-ordinating the high-school and college curriculums is through a variation in the content of the subject matter included in first-year college courses with the result that students who have completed a high-school unit in a particular field will not be required to take the same course in college as that taken by students who have not had this unit. Not all institutions which vary the courses to meet the diverse needs of students follow this plan of variation. In some cases the subject matter of a course is varied to meet the professional needs of students with the result that special courses are organized in a number of fields for students with special interests. Slightly more than one-fourth of the institutions offer general orientation courses designed to orient the student to college life. The colleges are tending more and more to emphasize exploratory and introductory courses in the work of the first two years. Approximately two-thirds of the colleges of liberal arts now offer in the Freshman and Sophomore years general survey courses. This development of general survey courses is one of the most significant trends of recent years in the junior-college curriculum of four-year colleges and universities.

CHAPTER VII

THE JUNIOR-COLLEGE CURRICULUM IN ENGINEERING SCHOOLS

HERBERT C. SADLER

At the risk of bringing down upon my unguarded head the wrath of many of my esteemed colleagues on the numerous faculties of our institutions of learning, I venture to suggest that their most popular indoor sport, if faculty meetings could be described in this somewhat flippant way, is that of arranging curriculums.

A casual glance through the various catalogues is enough to show that in arrangement, sequence, and content of courses, the time allowed for each, the subjects included in any one year, or the amount of load which the patient student is deemed capable of carrying without mental or physical collapse can only be described in the same manner as that of the afflicted one in the New Testament, "Our name is Legion for we are many." I suppose it is a common experience of practically all of those who have been doomed to serve on committees and to report upon suggested changes in curriculums that even in the small group endless discussions and compromises must be endured before anything approaching a unanimous opinion can be obtained. Even then it is doubtful if all are satisfied, and when submitted to the faculty as a whole the trials of the committee are magnified to the nth degree—the symbol n meaning the number of opinions represented by the number of members present.

I wonder if any teacher or group of teachers, representing any one particular branch of learning from Babylonian or Egyptian times down to the present day, has ever been really satisfied with the amount of time it has been possible for the student to devote to his own subject. Members of faculties tend to become intense individualists and idealists, certainly in some branches of learning and to a varying degree in others, and perhaps this may explain

why the personal element looms large in discussions in which a broad and somewhat catholic point of view ought to dominate.

I think it can be said that, taking the general attitude by and large, there has been if anything a tendency to place the main emphasis on the factor of "work" in a course or courses and to ignore or give only minor consideration to two other important factors: the ultimate aim of the curriculum as a whole and the human element as represented by the student.

A modern American university is usually composed of a number of schools or colleges, each representing some particular so-called "profession," and also an all-inclusive representative of the ancient institutions of learning, the college of literature, science, and the arts. The latter usually serves two purposes: the one for the benefit of those who wish to indulge seriously or otherwise in the luxury of a "higher education"; the other as a training ground in what is commonly called general culture, for those who have decided to pursue some profession. Each school or college is again subdivided into a number of departments and subdepartments representing some specific realm of knowledge. In this age of specialization, it is customary for each department to be furnished with an authority or expert as a head, who in turn endeavors to get as many other subexperts as possible on his particular staff. What is the inevitable result today? Not only is each school or college a professional school, but each department has become intensely professionalized.

In the arts college any department such as history, English, philosophy, ancient or modern languages, botany, zoölogy, mathematics, physics, or chemistry, to mention only a few, is staffed by "professional" men and is to all intents and purposes a miniature professional school. The same is true in colleges of engineering, in which we have such departments as civil, mechanical, electrical, chemical, and other individual professional groups.

What is more natural, therefore, in arranging courses, than that each should start from the dizzy heights of perfection at the apex, and work downward through an ever increasing area of preparatory courses until the pyramid has reached a broad enough base to insure its solidity and stability. Woe betide the tyro who

yearns to obtain a glimpse of something of the beauties of the structure which may be situated one-third or one-half way up. Only by patient and plodding steps and through the purgatory of preparation can he hope to reach the state of perfection necessary to the proper appreciation for, or knowledge of, that which his heart desires.

In order that the foregoing may not be misinterpreted, let me state that I am heartily in accord with a well-ordered and thorough foundation or background of courses for the individual who intends to make the particular branch of learning his *profession,* or has as an ultimate aim that "open sesame" to advancement in the academic world, the Ph.D. But there are numerous workers in other fields to whom a less comprehensive knowledge of a particular subject may be almost a necessity but who, on account of the time which they must devote to their chosen fields, cannot hope to give the same amount as that advisable for the professional.

The demand today in the various professions is for something more than mere technicians. They should have a certain amount of general cultural background, but the main reason for the preceding remarks is that in arranging any preprofessional work these facts should be borne in mind: first, that certain non-technical courses should not necessarily be of the same character as those desirable for others who expect to make these their life-work; and, second, that attention should be given by the teacher to the stimulation of the student's interest in the same. In other words, the ultimate aim of the curriculum as a whole and the desire of the students should be taken into account as important factors in the problem.

As illustrations, mention may be made of such subjects as English, modern languages, or even mathematics, physics, and chemistry, in the preparatory years for engineering. The engineer does not expect to become an expert in any of the preceding, yet all are necessary to his success; and certainly if in the latter stages of his university career he should wish to take up some further work in them there should be certain courses available for which his previous preparation is sufficient. The door should not be forever closed because of the fact that he has not gone through all the sys-

tematic routine advisable for one who intends to make any such studies his life-work.

Before proceeding to discuss a curriculum suitable for the profession of engineering, it is pertinent to inquire in the first place what is meant today by the term "engineer," and also what lines of activity former graduates of colleges have followed, and why a training of this character has been beneficial. Fortunately for those interested in the training of engineers, a very exhaustive survey has recently been completed by the Carnegie Foundation. The actual facts as to what some thousands of college-trained men have done in after-life, a composite picture of opinions on numerous details drawn from all sources including the profession, industry, and teachers, and many other factors that should properly be considered, have given definite answers to what in previous times were largely matters of personal opinion or guesswork.

One very important fact which was known in a general way has been absolutely confirmed, viz., that today a college of engineering cannot become a purely professional school analogous to those of law and medicine. The training of men who expect to practice the profession of engineering in its various branches, as, for example, consulting engineers, designers of engineering structures, etc., is only *one* of three main functions of a modern college. It is certainly true that there is probably room for a few institutions of this character, but, so far as the welfare of the country is concerned, it is absolutely essential that the majority must perform a wider function.

In order to make this point clear it is necessary to consider the present situation of the United States so far as its position as a world-nation is concerned. Like most other nations we have passed through the agricultural to the industrial stage, and whereas two or three decades ago our exports of farm products occupied the leading place, with the products of industry or manufactured articles distinctly secondary, today the order is reversed. Practically all manufacturing processes are of an engineering character, or at least involve machinery or the application of engineering principles, and hence the demand for men of engineering training has steadily increased. This has not meant necessarily that such men have de-

voted their time entirely to the practice of the several divisions of the profession, but rather that they have branched out into various types of executives or have graduated into the purely business side of industry. The engineering training has been in numerous cases almost essential to their success.

Another important development has been taking place within recent years, and one which the leaders have fully realized. Industry has passed through two stages: first, when it was composed of numerous individual concerns; second, when these were amalgamated into large units. During the amalgamation process, financial questions loomed large, and hence we see the dominance of the financier or banker and the general opinion that he was the only type that could act in the responsible positions. When the large units became subject to attack from legislatures, the corporation lawyer came into prominence, and in both stages the engineer was largely the hired man. Perhaps he had largely himself to blame, in that his intense interest in his profession led him into other paths than those of finance and management.

Today, however, things have changed, and financial and corporation problems are not the dominating ones in industry. The country has passed through the pioneer stage and is now in the world's trade. Industry therefore demands men who have been trained in the fundamentals of engineering, not only to carry on and develop the purely engineering side, but also for the executive and business positions. The salesman of today must in many cases be a trained engineer in order to talk intelligently about his wares. In other words, with the fundamentals of engineering as a basis and experience and ability to tackle other phases, such as finance and management, we have the type of man on whom industry must rely for the future if we are to keep our place in the world.

The purely professional engineering or purely business training does not fill all the demands of industry today, although each will always have its particular place. Thus far we see that an engineering college must adapt itself to the training of two principal types: the one, the professional engineer; the other, the engineer who will be responsible for the running and management of industry. Obviously, and this fact was also developed in the investiga-

tion previously referred to, by far a greater number of men will be demanded in the latter than in the former. There is a third group which, although the demand is necessarily somewhat smaller than the others, is necessary for the engineering college to train, viz., the research man. Industry, as well as educational institutions, is gradually developing this branch, and there is real necessity for well-trained research men. Some of the larger concerns are actually spending millions of dollars a year on research work, and as this is apt to be of the applied as well as of the fundamental type, they must look to the engineering colleges largely for trained men to fill their requirements in personnel. A combination of those trained along purely professional lines and in research work forms a group from which teachers of engineering should be drawn in the future.

While somewhat extraneous to the present discussion, but nevertheless closely connected with it, the question of the extent of an engineering course is a topic that has received a good deal of attention during the last ten or more years. A general four-year course seems to have become a firmly rooted institution in the United States, and as a basis for those who expect to enter industry generally or proceed further in specialized technical work or research, this practice will probably continue. If, however, a somewhat broader course is desirable, it is evident that a year or more of advanced work will be necessary for those who expect to become professional engineers, teachers, or research men. Incidentally it may be remarked that this arrangement would seem to fit in with the postgraduate training courses which have been established by a number of the larger industries.

In the foregoing discussion I have endeavored to draw attention to certain fundamental considerations that form, as it were, a background of facts that should be borne in mind when any attempt is made to lay down a curriculum in engineering, or even the first two years as represented by the work of the junior college. A proper appreciation of these may be helpful in eliminating certain pitfalls due to purely personal opinions and overemphasis on individual courses.

There is also another phase of the problem which might be called the elimination process, or means of discovery whether the

student possesses a real aptitude for engineering in its fundamental aspects. Various types of human brains react differently to different types of mental activities, and in most of the fields of human endeavor the successful ones are those who are so constituted that in the early stages of preparation the work required seems to come to them more or less naturally and without superhuman effort. In some cases certain abilities may remain dormant awaiting the proper stimulus, but in the majority the particular interests or desires are bound to dominate. One of the most difficult things to overcome, and one sometimes fraught with certain heartburnings, is the prejudice of a parent who has compelled his child to follow some line of work for which he has no aptitude and which he cordially detests.

If it is conceded that the foregoing ideas are sound, and the writer is convinced from actual experience that they are, then it follows that there must be what may be called an engineering mind. If we turn again to the Carnegie report, we find plenty of evidence which bears out the foregoing idea. The reasons for the reported failures in engineering colleges at the end of the first and second years show clearly that by far the greatest percentage includes men who have no real aptitude for engineering. Moreover, the greatest mortality, as represented by the numbers who drop out, occurs in the first two years. This does not necessarily mean that under a different environment a number of such failures might not have survived, but rather that originally, to use a colloquial phrase, they were in the wrong box.

An obvious conclusion may therefore be drawn, viz., that somewhere in the first and possibly in the second years of an engineering course, some subjects must be introduced which will test the student's ability or aptitude for engineering; otherwise, if the discovery that he is mentally unfit is postponed to the third year, much valuable time will be lost with the resulting prejudice to the best interests of the student.

So far, then, it would seem desirable that the work of the first two years should include something of what might be called the general culture or broadening type of studies to fit the student for further work in those branches of learning and to fulfil the condi-

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tions of industry already discussed, and also a type or types of courses which will not only act as a foundation for future work in science generally but which are also of a more particularly engineering character, as a test for aptitude in the profession. The first two years are inevitably introductory in character, and as such should contain, if possible, *all* elements that enter into the problem.

A discussion of a few of the more detailed points, particularly in the arrangement of work, might be considered, as these again have some bearing upon the curriculum as a whole, and have in the past led to a certain amount of discussion. They represent generally two main ideas as to the distribution of the two types of learning, as represented, on the one hand, by the general or cultural courses and, on the other, by the scientific and technical.

In most of the purely professional schools, it is now practically the universal custom to require the prospective students to concentrate their general studies in the first two or three years, and follow these with equally concentrated professional work for the remainder of the course. While this method may and possibly does produce satisfactory results in some cases, and practical conditions may force the issue in others, the question may well be asked if the same method is the best or most advisable in connection with an engineering training, in which, as stated in the preceding, the education of the purely professional man is only one of the functions of this type of school, and by no means the main one. A second method, in which the two types of studies are carried along throughout the whole curriculum, with a mild injection of some professional work in the earlier years and a similar treatment of cultural studies toward the end, represents another possibility in the solution. The latter is commonly known as the ribbon system. Before deciding between the two methods it is well to keep constantly in mind the facts mentioned in the previous discussion, and perhaps introduce at this point the more purely human element.

So far as the studies themselves are concerned, we have on the one hand in the scientific or engineering work a somewhat concrete, cold-blooded, and rather definitely ordered type of thinking in which romance or flights of imagination are somewhat rigorously eschewed; and, on the other, perhaps a greater freedom for the

individual to indulge in the last-mentioned qualities and, from his general reading, to draw conclusions more or less dictated by his own fancies. In some of the latter, knowledge of a general rather than of a specific type is in many cases more to be desired, especially if such studies are not to be used as professional tools but are more in the nature of an accomplishment which the social order expects from an educated individual.

The effects of the two types upon the method of thought and attitude of mind toward learning are therefore somewhat opposed. If the first few years are devoted entirely or preponderatingly to, say, the cultural type, we shall in most cases develop habits of thought which are not perhaps the most desirable in the more technical or engineering work; similarly, an overindulgence in the latter in the early stages may develop an attitude of mind somewhat approaching that of antagonism toward the cultural. Throughout the latter part of an engineering course, the work naturally will be of the more concrete and rigid type, but the judicious introduction of courses which tend to revive or keep alive some of the contacts with general culture started in earlier years will help to save the individual from falling too deeply into the professional ruts, so defeating one of the main demands of industry and the world today for the broader type of man.

Some general conclusions may be drawn from the foregoing discussion before mention is made of any specific studies desirable in the junior colleges as a preparation for engineering. At the outset, and granted that the facts enumerated are true, it would appear that one general college course, the same for all students irrespective of their individual tastes, desires, abilities, or aptitudes for a specific profession (be it engineering or otherwise), is not only a wrong solution but positively contrary to the best interest of those for whom the course is primarily designed, viz., the students—not the professors.

In the first two years certain continuity of studies would seem desirable not only on cultural but also on scientific lines, such as, for example, mathematics and perhaps one of the other sciences, in order to avoid a hiatus.

The introduction of some rather distinctive type of engineering

course, such as, for example, one in drawing and descriptive geometry, which in conjunction with mathematics and physics will help to test the student's aptitude for engineering, would seem desirable. This should be done as soon as possible so that in case of failure the loss of time on the part of the student may be reduced to a minimum.

Consideration might also be given to general courses in subjects such as English, history, languages, and possibly economics, so that if later on a student may wish to elect further work in these he will have had a sufficient background to do so with advantage. From a psychological point of view it would be well to emphasize the fact that subjects such as the foregoing are fundamentally "engineering" subjects, if this be interpreted to mean that they are just as essential to the success of an engineer as courses in the steam engine or electric machinery. It is, therefore, desirable that such courses be arranged so that the interest of the student is aroused and maintained.

Among the various schools or colleges and the profession at large, there is still some question as to the advisability of making the study of modern languages an absolute requirement. In certain branches, such as chemical engineering, it is generally conceded that a knowledge of German is very desirable. There is, however, an almost unanimous opinion that these should be optional in the general "cultural" group.

Each engineering college will probably always have its own ideas as to the number, type, content, sequence, and general arrangement of courses required for graduation, and any attempt at absolute standardization will be doomed to failure, and possibly rightly so. There is, however, a possibility of a certain amount of co-operation between institutions, particularly if in connection with the subject of advanced credit a too rigid adherence to the actual number of hours in any specific course is avoided, and the matter is settled on the broader lines of *sufficient* preparation to pursue the future work with advantage.

There is, in any discussion relating to junior colleges and their relation to universities or other institutions of higher learning, a factor that cannot be overlooked. The rapid growth of the former in the last few years has meant that they are becoming a serious

factor in the realm of higher education, and therefore there should be established the closest kind of contact between the two units. It has been the experience in some cases, especially in the smaller towns, that civic pride has led to the establishment of a so-called junior college which is nothing more than a glorified high school. Inadequate funds for the proper pursuance of the work, both in staff personnel and equipment, may mean a grade of work distinctly lower than that of the first two years of the university. There should be, therefore, some standard whereby the work of the junior colleges, particularly for those students who intend to continue toward a degree, may be regulated. In any case such colleges should be urged to undertake only work that can be done in an effective and high-class manner, and preferably by a separate staff from that of the high school. In some cases there might be a certain amount of overlapping, but the methods of teaching should be of the university type, if for no other purpose than to train the students for future work.

Under these circumstances it would be presumptuous for the writer to attempt to lay down a detailed or specific two-year course for all junior colleges as a preparation for enginering. However, it would seem desirable to include in such institutions studies taken from the following groups: (*a*) English and English literature; (*b*) history, economics, foreign languages; (*c*) mathematics, mechanics; (*d*) physics and chemistry with laboratory; (*e*) drawing and descriptive geometry, and possibly mechanism or shops.

The end of the second year of work beyond the high school is apt to be a natural stopping point in educational training for a number of students. It would therefore seem to be desirable to require some type of comprehensive examination at the end of this stage, in order to discover if the student is really fitted to pursue the remainder of the university work with profit to himself, and not to prove a deterrent to the maintenance of real university standards. The establishment of such an examination might have a good psychological effect and act as a stimulant for the student to get the most out of his first two years, rather than to dismiss each subject at the end of the course as something accomplished and promptly to be forgotten.

CHAPTER VIII

THE FUNCTIONS OF GUIDANCE AT THE JUNIOR-COLLEGE LEVEL

GRAYSON N. KEFAUVER

The nature and extent of the responsibility of an institution for guidance is affected by the variability of the students served. The responsibility is reduced if the student body is homogeneous with approximately equal ability and with similar educational and vocational objectives. When concerned with a heterogeneous group of students having different interests, abilities, and educational needs, it is important that the needs of each individual be discovered and that the training be adapted to him.

The extent of variability of the students in junior colleges differs greatly among the institutions. In general, the students of junior colleges are more highly selected than those in the high school below and less highly selected than those in the senior college above. The large elimination during the early years of high school affects more largely the students of lower capacity, leaving larger proportions of those on the upper levels for continued education.

The comparison by Koos[1] of the intelligence of students in the Freshman year of the University of Minnesota and Ohio State University with that for the same year in ten junior colleges showed practically no difference in the distribution of scores on the Army Alpha Test. However, the comparison of economic status showed that public junior colleges draw more largely from lower economic groups. As junior colleges expand their program to serve the need more adequately of those who do not continue to the university, they will be less selective than the college and university, and the variability of the student body will become more nearly like that of the high school.

[1] Leonard V. Koos, *The Junior College Movement* (Ginn & Co., 1925), p. 103.

A consideration of the different educational programs of students enrolled in junior colleges will assist in clarifying an aspect of the guidance problem. It is not difficult to recognize four different educational interests. There are those who desire to extend their general education beyond high school without ambition to continue to a college or university. They do not have a vocational objective. It is possible for them to continue their formal education a year or two longer, and they desire to follow the interests developed in high school.

A second group of students desires to continue their general and cultural education through the junior college and obtain a degree from a higher institution. They are not concerned about the vocational objective in either the junior college or the senior college. The proportion of students falling into groups 1 and 2 will vary greatly among institutions. In certain institutions serving students highly selected on the economic scale, the proportion will be large. For other institutions, practically all of the students will fall into the two remaining groups.

A third group of students do not plan to extend their formal education beyond the junior college and desire specialized vocational training. These students will be required to seek employment when leaving school and the junior-college training should enable them to secure employment in the more desirable occupations on the semiprofessional level and also to improve their opportunities for advancement. The number of students in this group will increase as junior-college administrators develop terminal courses that serve the varied needs of this group.

The fourth group, the largest in many junior colleges, has professional ambitions requiring at least a four-year college course. For this group, the work in the junior college has a vocational objective and is chosen to provide the foundation for the more specialized work in the senior college.

The provision of differentiated programs requires that students make a decision of far-reaching import. Specialized training is intended for students with definite plans. Institutions which offer specialized courses should assume the additional responsibility of determining if students who elect them have the requisite capacity

for success and will probably make use of the training which is received. If students select these subjects promiscuously, there will probably be greater waste than if all continue in the more general courses.

THE DISTRIBUTION OF STUDENTS AN IMPORTANT FUNCTION OF GUIDANCE

Most of the students coming to the junior colleges have made the choice of a life-career. Crathorne[2] found that 84.9 per cent of 2,069 students entering eleven colleges had a definite vocational objective. Many of those without a choice are desirous of making definite vocational plans but have been unable thus far to come to a decision. These students should be given assistance in learning further about the occupational opportunities from which a choice might be made, and in discovering more definitely their capacities and interests. Students with a vocational choice should be encouraged to continue a critical attitude toward the chosen occupation and to re-evaluate it in terms of the interest and success in the work done in the junior college. Also, they should be encouraged to continue to study the conditions, opportunities, and requirements of the chosen occupation in relation to other occupations. The extent of shift of plans of adults and adolescent youth and the lack of relationship between the intelligence of students and the intelligence requirements of chosen occupations disclosed by investigations makes desirable continued scrutiny of vocational plans. It is especially desirable to challenge the thinking of over-ambitious students of average ability looking forward to entering the socially preferred professions. Their choice is frequently made largely upon the basis of the social prestige of the occupation with little concern about personal capabilities.

The problem of distribution of students is accentuated by our insistence that these decisions be made by the students for themselves. Our democratic conceptions cause us to guard against any tendency toward a paternalistic program in which the guidance agency allocates individuals even though it is considered to be for their best interests. The added maturity of junior-college students

[2] A. R. Crathorne, "Change of Mind between High School and College as to Life Work," *Educational Administration and Supervision,* VI (April, 1920), 274–89.

and their lessened dependence upon their parents gives them further freedom for self-direction.

The choice of an occupation, if it is to be intelligent, must be based upon knowledge of the occupational opportunities from which a choice can be made. Students familiar with only a small number of fields of work in evidence in their immediate environment are restricted in their choice. The information gained about these occupations in chance contacts is superficial and incomplete. Some of it may be even incorrect and misleading as the casual onlooker may be impressed with certain conditions and fail to recognize others. That is especially true since occupational life has become so specialized and concentrated in large centers. Knowledge of the conditions of work, the desirable education for entrance, opportunities for advancement, requirements for success, remuneration, and other characteristics cannot be obtained accurately through the informal contacts of students. This information is essential if the choice of an occupation is to be an intelligent one.

It is not enough for students to have knowledge only of the occupations into which they might go. With this information considered alone, all would choose the socially preferred occupations. The large proportion of students in our secondary schools choosing the professions, and especially the professions of higher prestige, suggests that too frequently only the desirability of the occupation is considered. A consideration of at least equal importance is the capacity which the student brings to his work. There is a fallacy accepted somewhat generally by the populace, and approved occasionally by an educator, that all "normal" individuals can succeed in any field of work if they apply themselves assiduously. This failure to recognize the *facts* of individual differences not only explains the fruitless endeavor of many students of low ability to attain a position requiring high ability, but it contributes also to the socially more wasteful practice of students of superior capacity failing to recognize their capacity and being contented with average attainments. A second fallacy concerning abilities of students suggests that an individual is equally capable in all types of work and fails to recognize the specificness of capacities and the variation among them for an individual. Hull reports that

the extent of trait differences within the average individual was found to approach rather closely the amount of difference found in a normal group in respect to any single trait. After a certain allowance had been made for inaccuracies, it was concluded that the trait differences here investigated average approximately 80 per cent as great as individual differences.[3]

Consequently, it is important for the individual not only to choose an occupation in which he has a reasonable chance for success, but that the chosen occupation utilizes the capacities in which he excels most. The program of the school and of guidance should inform the individual or assist him in discovering his general ability in relationship to that possessed by other people, and also the relationship between his abilities in various types of work. This knowledge of his abilities can then be related to the requirements for various occupations and enable him to make a choice of an occupation in which he has a reasonable chance for success.

The distribution of students to subjects, curriculums, colleges, and universities constitutes a second phase of the general problem of distribution. Before this distribution can be made, vocational or other plans should be formulated. After having decided upon an ultimate objective, the educational requirements to achieve the goal should be made clear. Also, information describing the offering of the junior colleges and other institutions should be made available. With such facts at hand, students can choose intelligently from the educational opportunities that are available. As for occupational choices, the decisions will be made by the students and they should be provided with an adequate basis for them.

FACILITATION OF ADJUSTMENT A SECOND IMPORTANT FUNCTION OF GUIDANCE

The program of guidance should facilitate success in the work of the school. Proper placement in subjects and curriculums will contribute much. Even with proper placement, however, disturbing conditions will intrude and cause maladjustment and success below the possibilities of the individual. A careful survey of conditions of work of students should uncover disconcerting factors and

[3] Clark L. Hull, *Aptitude Testing* (World Book Company, 1928), p. 47.

aid in preventing failure and maladjustment. The intensive investigation of failing students, students not working up to capacity, or students personally or socially maladjusted will, in many instances, uncover the cause and lead to improvement. Unfavorable home conditions, health, or unsuccessful social relations in the school or community may lead to disorganization. While much of this work will be remedial, larger importance should be attached to the procedures employed in insuring successful adjustments on the part of all students.

DESIRABILITY OF A RESTRICTED CONCEPT OF GUIDANCE

The literature dealing with guidance is somewhat confusing in giving a variety of connotations to the concept. Especially does the generalized interpretation of guidance as "education" fail to give direction to the guidance movement. It even endangers the identity of the special concepts of guidance that are important during the years of high school and the junior college, namely, distribution and adjustment. Because of the tendency for some to conceive guidance as including all of the activities of education, it seems desirable to give attention here to some of the activities that cannot properly be considered as guidance, although there are doubtless certain very definite relationships between them.

Civic, social, and moral *training* through the program of extracurriculum activities has been referred to as civic guidance, social guidance, moral guidance, and ethical guidance. Similarly, the program of health *education* involving the development of health habits and attitudes through activities and instruction has been confused with guidance. Individualized instruction and the resulting adaptation to individual differences, activity teaching and the determination of subject content in relation to the educational needs of students have all been involved in the concept of guidance. If all of these activities are included we are justified in referring to guidance as education and education as guidance. In doing so, however, we fail to particularize the special function of guidance. The discussion of procedures that follows may serve to make more definite the scope of guidance as conceived in this report.

PROCEDURES FOR REALIZING THE FUNCTIONS OF GUIDANCE

There is larger recognition of the need than of the ways of providing guidance service. What to do and how to do it are the two most pressing questions before administrators. The results of an analysis of guidance practice in fifty-two public junior colleges, made in connection with the preliminary survey of secondary education in California by Leonard V. Koos and Frederick J. Weersing, will be drawn upon in the discussion that follows.

PROCEDURES FOR INFORMING THE STUDENT

It has been indicated earlier that informing the student about the educational and vocational opportunities constituted one of the most important features of the program of guidance. A variety of means has been adopted to achieve this purpose. Five general types are to be considered, namely, (1) publications, (2) organization of the curriculum, (3) courses, (4) visitation and observation, and (5) oral presentation.

The types of publications used most frequently (in 80.7 per cent of the institutions) in informing students are the published program of studies and the catalogues of colleges and universities. The catalogues of higher institutions are usually kept on file in the library or in the office of the dean or counselor for use by students. A booklet, more elaborate than the printed program of studies, is used nearly as frequently (in 73.0 per cent of the institutions). The junior-college bulletin contains information on college entrance in 67 per cent of the institutions. A much smaller proportion of the schools (13.4 per cent) prepare a special circular on college entrance. General information about occupations is often made available by providing literature in the library dealing with occupations. The University of Michigan has published an extended bibliography[4] of vocational information for college and high-school students. The last publication to be noted is the school paper. Nearly a fifth of the institutions use it in some way. Special guidance numbers or a special guidance section may be published or items of interest to students may be printed at any time in the

[4] *Vocational Information,* a bibliography compiled by W. E. Parker and D. H. Mayer, "Vocational Series," No. 1 (1928). Pp. 236.

school paper. Some of the larger cities have made investigations of occupational opportunities in the local community. These findings have been published either in a single pamphlet for all occupations or in a different pamphlet for each occupation.

The organization of the curriculum is significant in connection with guidance. The announcement of two or more curriculums in three-fourths of the schools suggests to students the fields or types of training offered. In half of the schools with the multiple-curriculum organization, the curriculums lead to specific occupations. The provision of a flexible program adapted to the needs and interests of students permits of shifts in program as changes in interests make it desirable. Exploratory contacts with actual working conditions are made possible by the offering of part-time co-operative curriculums in 9.6 per cent of the institutions. Extension or extra-hour classes are made available in a much larger proportion of the schools (38.4 per cent). All of the part-time co-operative curriculums were reported from California, indicating that this practice has not yet gotten under way in other states.

The regular courses of the program of studies make distinct contributions to the student's knowledge of the fields of specialization in higher institutions and of occupational conditions. The value of this contribution to the understanding of occupational opportunities depends upon the extent to which courses are adjusted to life-situations. Those specifically preparatory for some occupation will be most informative.

In all courses, the instructors should be certain that students appreciate the value or use of the content of the course. Appreciation of the value of a subject has been shown to be highly significant in affecting students' interests in a subject. The knowledge of its value and the resulting appreciation stimulate students to apply themselves in the subject, and give students a basis for deciding on further training in the field.

All subjects of study may have exploratory significance. A high degree of success and interest in a course justifies encouragement to further work on a higher level. When a student is more successful and more interested in some particular field of work than in others, this fact is predictive of capacity to excel in more

advanced training and to compete successfully in the occupations with which the subject is related.

The recognition of the need of informing the student has led to the organization of new courses prepared largely for this purpose. A course on vocational information devoted exclusively to a study of vocational conditions and opportunities has been organized in a small number of schools (7.7 per cent). A much more frequent offering is the orientation course which is offered in slightly over half of the schools. This course is only partly concerned with guidance, as large emphasis has been given to training in the social field. This course has large exploratory possibilities in opening up to students the nature and extent of knowledge in various fields as a basis for later choices of more specialized courses. An extended investigation of the orientation course has been made by Fitts and Swift and published by the University of California.[5]

Three types of visitation are provided to inform students. The most frequent provision (in 40.3 per cent of the institutions) is an open-house demonstration for high-school seniors. This practice is especially important if the junior college has been organized for only a short period of time and if the conception of the program of the junior college is especially inadequate. Such a visit will inform students of opportunities for education in the community beyond high school, and provide a basis for choosing a junior college or a college or university to attend in another community.

Visits of junior-college students to higher institutions are made by a fourth of the institutions. These visits are of value in stimulating interest in continued education beyond the junior college, and in informing students about fields of work for which training can be obtained in higher institutions, thereby providing a better basis for choice of subjects in the junior college.

Excursions are also arranged to industrial plants and commercial establishments to give students a clearer conception of the nature of the work done in different occupations. Excursions are

[5] Charles Fitts and Fletcher Swift, *The Construction of Orientation Courses for College Freshmen,* University of California Publications in Education, Vol. II, No. 3 (University of California Press, 1928), pp. 149–250.

more valuable if they are preceded by a study of the conditions and opportunities which these establishments present.

Various types of talks on educational and vocational topics are presented to students as they progress through high school and junior college. Representatives of the junior colleges (78.8 per cent) visit high schools from which they draw students explaining the courses and the virtues of the local junior college. In like manner representatives of higher institutions come to the junior college to describe conditions and opportunities for advanced training, with special reference, of course, to their own institution. Talks are also presented by specialists successfully engaged in the various occupations. These talks are given either before the whole student body in an assembly or before groups especially interested. The small group conference is frequently used to supplement a more general presentation before the whole school. To supplement the group contacts, and in some instances used alone, individual interviews are arranged between students and those engaged in specific occupations. In all presentations by persons representing occupations and higher institutions, it is important that every effort be made to insure accurate information. Representatives of colleges, in some instances, are more interested in attracting students than in informing them. Some employers are selfishly interested in attracting a large number of workers to their vocation to insure available labor at a low rate, and some employees are interested in discouraging young people to safeguard the demand for workers at a higher rate. The difficulty in obtaining satisfactory presentations by lay people has caused many schools to place large emphasis upon reading materials, the content of courses, and talks by members of the staff.

PROCEDURES FOR OBTAINING INFORMATION ABOUT STUDENTS

The second important group of procedures in guidance concerns the accumulation of data about students. Educational and vocational plans made without relation to the capacity, interests, and background of students are highly misleading. Too frequently only the social and personal desirability of the occupation is considered without reference to the capacity that students bring to it.

Correspondence between the capacities of students and the requirements of their chosen occupation constitutes one of the most important objectives of a program of guidance.

Certain data can best be obtained directly from the students. The most frequently used data are the educational plans (in 73.0 per cent of the institutions) and the occupational choices of students (in 63.4 per cent of the institutions). The educational plans that are recorded vary in definiteness. They may involve the choice of curriculum, the choice of subjects throughout the junior college, plans to complete the junior-college course, plans to enter a higher institution, the name of the institution the student plans to enter, and the program projected by the college or university. The making of a record of occupational plans requires students to give attention to such matters. Vocational plans of students who have made a decision can be used to advantage in ascertaining whether the educational program is satisfactory.

Both the educational and the vocational plans of students should be considered with reference to their capacities and interests. Highly capable students with low-order ambitions should be stimulated, and students with little ability and high ambitions should be challenged to consider seriously their inability to achieve in their chosen fields. The projection of educational and vocational plans for a period of years makes possible a deliberate consideration and a checking of plans in the light of evidence which is not possible when the issues are raised only at the time the decisions have to be made. It is a regret of the speaker that the time available precludes reference to a considerable number of investigations throwing light on the accuracy, permanence, and value of occupational plans of adolescent youth. It must suffice here to indicate that there is no way of avoiding the use of educational and vocational plans in shaping the programs of junior-college students. The only safe course to pursue is to obtain more accurate thinking by students through a program of guidance.

Records of student self-appraisals are secured more as an indication of the kind of thinking they do than as an indicator of their real capacity. Allport obtained a negative correlation of —0.67 between a measure of intelligence and the students' esti-

mate, indicating a tendency for dull students to consider themselves bright and bright students to consider themselves average or below average. The greatest error exists in the case of students below average in intelligence.

The greatest advance in self-analysis has been made with respect to vocational interests. The interest blank and the investigations of Dr. E. K. Strong, of Stanford University, promise much assistance in determining the vocation interests of individuals. In the work of Strong the reaction of the individual to a large number of items is compared with the reaction to the same items of persons employed in different occupations. If the reactions of an individual are similar to the reactions of a group successfully engaged in an occupation, Strong contends that this agreement indicates that the individual has interests appropriate for that occupation. Informal analysis blanks have been prepared by guidance workers to challenge the thinking of students upon critical phases of their program.

Data descriptive of home conditions are seldom (in 9.6 per cent of the institutions) used by the junior colleges that were canvassed. Information was not obtained concerning the extent of the use of other types of social data. The nationality, whether parents are living, the occupation of parents, brothers, and sisters, their education, and the plans of the parents for their child are all factors that affect the individual's attitude toward educational work and toward the choice of an occupation. To ignore them fails to consider a group of factors highly significant in conditioning the success and advancement of young people in school and in vocations.

The records of the work done in the earlier grades constitute one of the most valuable indications of what the individual will do in the future. Records of work done in the senior high school are used uniformly by junior colleges. Much less frequent use is made of records of work in the junior high school (in 26.9 per cent of the institutions) and in the elementary school (in 17.2 per cent of the institutions). School marks indicating the results of hundreds of hours of work reflect not only what students have capacity to do but also the habits of work and other personal traits that

affect success. Previous success of an individual represents one of the most important measures available. It is more valuable if it extends over a number of years, including even the work in the elementary school.

Records of schoolwork, including records of participation in extra-curricular activities, serve, in addition to a general indication of capacity, to point out special ability and special interests. When a student excels in a field of work over a period of years, there is indication of special talent and special promise of success, if that field is chosen as his vocational specialty.

The most frequently used type of test in junior colleges is the mental test. Many of the institutions (40.3 per cent) obtain test data from the high school from which the students come. Half of the institutions give a mental test to all entering students. Two of the junior colleges give mental tests to only the problem students. The group test is the dominant type of test used in a fourth of the schools to supplement the results of individual examinations.

The mental test is of value in suggesting the possibilities of achievement. When used in connection with other data, especially success in school work, it increases the accuracy of the prediction of probable success in further schoolwork. If an individual rates much higher on the mental test than in achievement, an attempt should be made to ascertain the cause or causes of the lower achievement. When there is a large discrepancy between achievement and a mental-test score, especially if the standing on the mental test is lower than in achievement, an additional test should be given to guarantee a valid mental measure. If the mental measure is in agreement with all of the other information concerning the individual, there is less value in extending the testing beyond the single test. The mental test is a very helpful measure when used wisely by one with thorough knowledge of its possibilities and limitations.

Other measures used in junior colleges are special aptitude tests, placement tests, vocabulary tests, will-temperament tests, and ratings of personal qualities. The special aptitude tests, still in the developmental stage, have significance for vocational guidance. By means of the special tests it is possible to predict with greater

accuracy than with mental tests success in specific types of work. The best-known types of tests are the mechanical aptitude tests by Stenquist and MacQuarrie, and the music test by Seashore. It is also possible to predict success in school subjects with greater accuracy by a special test than by the general mental test. The higher relationship between scores on the Orleans-Solomon Latin Prognosis Test and success in Latin is illustrative.

Time does not permit a detailed consideration of all of the various measures, their relationship to success, and their possible use. Books of the type of *Measurement in Secondary Education,* by Symonds,[6] *Aptitude Testing,* by Hull,[7] and *Mental Tests,* by Freeman,[8] give the basic knowledge that should be possessed by one using the tests referred to.

PROCEDURES IN GUIDING THE STUDENT

The guidance of individual students does not imply that the student will be relieved of the responsibility of decision and the direction of his own activities. This responsibility cannot be carried by the guidance worker. An important tenet of our democratic philosophy preserves for each individual the freedom of choice of livelihood. Even though an individual, in our judgment, chooses unwisely, we cannot justify the use of force in placing him in a field, in our judgment, better adapted for him. There is the responsibility, however, after informing him of the opportunities and requirements in different occupations and discovering his capacities and interests, of counseling with him, assisting in the interpretation of information, and pointing out inconsistencies between his plans and his capacities. This service requires individual contact with the student.

The most frequently provided interviews (in 82.6 per cent of the institutions) are those concerned with quality of work. This concern is with failing students or with students not working up to capacity or both. Failing students ordinarily are given the larger

[6] Percival M. Symonds, *Measurement in Secondary Education* (Macmillan Co., 1927). Pp. 588.

[7] Clark L. Hull, *Aptitude Testing* (World Book Company, 1928). Pp. 535.

[8] Frank Freeman, *Mental Tests* (Houghton Miffln Co., 1926). Pp. 503.

consideration. Interviews are also provided for a consideration of educational and vocational plans. Approximately a third of the institutions with provision for interviews keep a record of the outcomes of the interviews for future use. More intensive studies are made of problem cases in a fourth of the schools. Such investigation involves supplementing the contact in the interview with detailed information on social conditions, health, school success, and the results of various tests, and other facts.

Junior colleges have not adequately stressed placement and follow-up in their program of guidance. Students who were transferred to higher institutions received attention in a majority (53.8 per cent) of institutions. Students who enter occupations after completing the junior-college course are less frequently considered, and those who do not finish junior college are given consideration in the follow-up program in only 21.1 per cent of the schools. The follow-up of students going out from an institution has the dual purpose of facilitating successful educational or vocational adjustment of students and of evaluating the program of the institution by disclosing the extent to which the needs of the students have been satisfied. It is to be regretted that only a small proportion of the schools are giving attention to the success of the students who go directly from the school to occupational activity.

THE JUNIOR COLLEGE IN A CRITICAL POSITION FOR GUIDANCE

The pressure to assist students in the junior college through a program of guidance is not unlike that at the high-school level. The junior college bears much the same relationship to the senior college as the junior high school bears to the senior high school for students who do not continue their education beyond the twelfth grade. In both instances, some of the students are closing their education in the "junior" unit. Many plan to continue through the senior unit. For them, there is need of choosing from among the specialized courses. In high school, students can continue in the general college-preparatory course if they plan to go to college and have not made a vocational decision. In the junior college, the decision should not be delayed further. Students have already reached the levels in which definite specialization is begun for

many occupations for which the colleges and universities provide training. Most of the remaining occupations require specialization at the beginning of the junior year or immediately following the junior-college unit. Further delay cannot be justified by the assertion, not infrequently heard in reference to the junior and even the senior high school years, that students are not sufficiently mature to make a decision of such far-reaching importance.

Students with plans for training for semiprofessions during the junior-college years face the responsibility of shaping the details of this training. They have their last opportunity to change their plans to another occupation and program of training on the same level or to raise them to the professional and the university level. Students entering the junior college with plans for university work should reconsider their plans and assure themselves that the program they are following is the most desirable for them.

The service of guidance in distributing students to the variety of courses and curriculums in the institution, in stimulating students to make or to improve their educational and vocational plans, and in preparing them to make decisions related to specialized work in the senior college and university represents one of the most important phases of a successful junior-college program. It will assist in discovering the educational needs of the students and the adequacy of the existing offering.

The foregoing discussion has reported a considerable amount of guidance activity. However, the very meager attempts at guidance in many institutions indicate the need of larger emphasis upon this phase of the program. There will doubtless be an improvement in the guidance service in junior colleges along with a similar development in high schools and higher institutions. This development, with increased recognition of the needs of students and of individual differences, will make large contributions to the purposes which have actuated the organization of junior colleges.

CHAPTER IX

A CRITICAL REPORT OF THE CHICAGO EXPERIMENT WITH THE COURSE ENTITLED "THE NATURE OF THE WORLD AND OF MAN"

MERLE COULTER

The "Nature of the World and of Man" is the first of the several courses in the General Survey Department of the University of Chicago. It was the first course to be offered in the history of this young department, and it is now the first of the survey courses which the entering Freshman takes. The course extends over the Autumn and Winter Quarters of the Freshman year, meeting five times a week, so that it yields altogether two majors of credit, the equivalent of six and two-thirds semester-hours.

The plans for this course were worked out during the winter of 1923. Professor Ernest Hatch Wilkins, who was at that time Dean of the Colleges at the University of Chicago, and who since has become president of Oberlin College, took the initiative in this matter. After conference with about a dozen of his colleagues, and study of what had been done with similar courses elsewhere, notably at Columbia and Dartmouth, Dean Wilkins appointed Professor H. H. Newman, of the Department of Zoölogy, to take charge of the new course.

The new venture was regarded by those concerned as an experiment, though hope was expressed on all sides that the course would come to stay, for the benefits that it proposed to convey were large and glowing. As nearly as I can recall, the proposed benefits were as follows: (1) To give the student a survey of the natural sciences, for purposes of orientation. This would presumably develop a well-rounded idea of the bearing and value of the natural sciences upon human affairs, and would enable the students to choose more intelligently such future courses as they might wish to take in the various natural science departments.

(2) To instil in the minds of these Freshmen an understanding of, a respect for, and an ability to employ the so-called "scientific method." It was thought that perhaps this might be done more impressively in a course of this sort, with its tremendous scope, than in any previously existing courses. (3) To bring a large group of Freshmen into direct contact with a fairly large group of "distinguished" scientists. At this institution, as elsewhere there has been much complaint that junior-college students have little opportunity for contact with the leading men on our faculties. The new course was to meet this complaint by providing some such contact, for whatever it might be worth.

These were the main objectives of the course as it was originally planned. As it has actually been worked out, there appears in the course what is a fourth rather definite objective, and that is instruction in the doctrine of evolution. This was not, however, an essential part of the original plans. It merely proved convenient to organize the subject matter of the course on the basis of evolution. The structure of the course was so vast that a high quality of framework and of cement had to be sought for. Evolution provided the suitable material.

During its career of five years, the course has been modified in several respects. These modifications have resulted from the following causes: (1) Several instructors have attended every meeting of the course. These instructors have studied the reaction of the students to the material that was presented to them and to the methods that were employed. Where these instructors could discover room for improvement, and where it was expedient to make such improvement, the course was changed accordingly. (2) During one year the sixteen lecturers in the course met once a week for several hours. This was in connection with the preparation of the textbook which also bears the title, *The Nature of the World and of Man*. Many useful suggestions arose from these meetings, and other suggestions have come from the same individuals since. (3) The opinions of students upon the course have been solicited, and more of their opinions have come in unsolicited. Certain modifications have been made in response. (4) Pressure from the outside has been exerted. The faculty, the President's office, and the Col-

lege Dean's office have urged continuously the enlarging of the enrolment limit of the course to meet the increasing demand, and have occasionally made other suggestions.

So changes have been made, and some have proved changes for the better. I take it that I am to attempt to evaluate for you the original experiment, as well as these changes that have followed. It occurs to me that I can do so most conveniently by taking up separately the several aspects of our experiment.

SUBJECT MATTER

The original content and sequence of events is indicated by the following list: astronomy; cosmogony; geology; physics; chemistry; nature and origin of life; bacteriology; relation of living organisms to environment; evolution of plant kingdom; evolution of invertebrates; evolution of lower vertebrates; evolution of man; factors in organic evolution; eugenics; embryology; human physiology; psychology; social institutions.

Only a few major changes in content have been effected. The final group of lectures on "Social Institutions" has been discontinued. These had been presented by a member of the Sociology Department. Apparently, they had operated to shake the confidence of the class in the adequacy of the evolution concept, which had been built up through the rest of the course. They had partially destroyed or weakened that which had been painstakingly created, and had provided no constructive replacement.

Let me hasten to declare that it has never been a primary objective of our course to cultivate in the minds of these Freshmen students of ours any blind faith in the concept of organic evolution. In fact, we take more than a little pains to encourage open-mindedness and independent thinking on all matters. From one point of view, therefore, it would have been quite desirable to introduce into the course one set of lectures which served to cast a reasonable doubt upon the thoroughgoing adequacy of the principles employed in the others. At the outset I think that everyone of us might have agreed to such a maneuver. But actual experience with the first running of the course indicated rather clearly that this maneuver produced a very unhappy result. During a period of over five

months we had been building up in these eager Freshmen minds a real enthusiasm for the scientific method and the concept of organic evolution. Never before in their experience had they fully appreciated the reliability and the extreme utility of this method. Never before had they encountered a concept which had served to make orderly such a tremendous mass of interesting and important phenomena. Their state of mind at this stage was one of sheer happiness in their educational opportunity; they were eager to plunge into further intellectual pursuits with their new equipment and a new confidence. And then, as the culminating set of lectures in our course, we told them that it was foolish to attempt to apply a rigorous scientific method to the analysis of most human problems, and that the evolution concept was conducive to confusion rather than clarity when applied to social institutions. Their faces fell, their ardor was dampened. It was like providing a group of impressionable young children with the most wonderful party they had ever experienced, and then serving them castor oil for the last course.

We decided that the enthusiasm of youth was too important to play with in this way. Sober intellectual considerations had to give way before it. We would send the children home from our party with their enthusiasm intact and let the morning after take care of itself.

The only other major change in content has been the introduction, during the last two years, of a few lectures on religion, which come right at the end of the course. Professor Newman feels that our course has destroyed or seriously shaken the religious beliefs of a considerable number of the Freshmen, and that it is our responsibility to make some sort of restitution. So, in this last set of lectures, an attempt is made to show that the natural sciences are fundamentally in accord with intelligent Christian belief.

Some of the lecturers in the course disapprove the inclusion of anything about religion. They insist that the "Nature of the World and of Man" is a course in natural science, that it is dedicated to the scientific method, that there is no room in the scientific method for emotional reactions, that religion is by definition an emotional affair, and that therefore it has no place in our course. They claim that if our course wounds any of our students in the region of their

religion, they will have to go elsewhere for repairs. Our course is purely elective, and shockable students need not register for it.

On this last point, let me say that we do employ an expedient which should serve to eliminate shockable students from our course at the outset. At the second meeting of the class, Dr. Bretz gives them a general lecture designed to shock the very "daylights" out of the students, and concludes by pointing out that if they do not like this they had better drop the course at once. Let me hasten to add that this lecture is by no means obscene or lurid. Its shocks are directed rather at those who accept a literal interpretation of the Christian Bible or any other authoritative document. What is the result? The result is that the students get a big kick out of this sort of thing, and all of them continue in the course. This is the only expedient we have provided for straining out the shockables. Perhaps we should do more.

I would prefer to withhold my own personal opinion on this general question, mainly because I have none. I feel sure that unless these lectures on religion are handled very capably, it would be far wiser not to attempt them at all. Professor Ames has handled them more capably than I anticipated could be done. What is to be the future of this part of our course, I do not know.

METHOD

On each of the subjects in our course a series of two, three, or four lectures is given. Each lecture is given by that individual in our general faculty who comes closest to being an authority upon the subject treated, and who, at the same time, has some facility in lecturing to Freshman classes. These lectures receive no extra compensation for the service. They have been glad to give it gratuitously.

Many of the lectures are illustrated by specimens, charts, and lantern slides. In two places in the course motion pictures are employed. Most successful of all are the demonstrations of actual experiments conducted under the eyes of the students. Chemistry and human physiology have gone farthest in this. We are all agreed that the demonstration method should be employed more extensively.

Originally the lectures provided the class with its first contact with the subject, so that the students were obliged to take complete lecture notes. Now we have our own text, and the students are expected to read the appropriate chapter in advance of each series of lectures. Each lecturer in the course has written his own chapter in the text, except that there is no chapter on religion.

There has been one obvious disadvantage in the use of the text. The lecturers had put their best thoughts into the text chapter, so that the lectures subsequently were robbed of their most resonant thunder. But there are more than enough advantages to compensate. The students, having read the text chapter in advance, are not obliged to take lecture notes so frantically, so that they can now absorb more comfortably the ideas that are thrown at them in lecture. The lecturers, relieved of the responsibility of a thoroughly organized and completed presentation, can concentrate more effectively upon some of the more important demonstrations. Furthermore, the lecturer can now take time to introduce more examples and to describe each example more fully. This, of course, is desirable, both in the interests of driving home a point and in the interests of tying the principles more closely to matters of common experience.

In addition to the text, we employ a set of books for collateral reading. This set of books has been changed from time to time. The set used this last year was as follows: *Astronomy,* Moulton; *Man and the Earth,* Schuyler; *Creative Chemistry,* Slosson; *Microbe Hunters,* DeKruif; *The Evolution of the Earth,* Yale University Press; *The Evolution of Man,* Yale University Press; *Evolution, Genetics, and Eugenics,* Newman; *Anthropology,* Kroeber; *The Human Body,* Clendenning.

The students are obliged to buy the text, but the entire set of books for collateral reading is rented to them, by our rental library, at a so-called nominal charge. Originally, it was hoped that the students would develop such an overpowering interest in the subject that they would devour every crumb of these collateral readings on their own initiative. Accordingly, no special assignments were made in these outside books, but the books were merely put into the hands of the students. This was entirely consistent with

the slogan which President Mason so often voiced, "Education through opportunity, not compulsion." Now as it became evident to the students that they were not to be held for the outside readings, they did exactly what one would expect, i.e., most of them stopped doing any outside reading. In the absence of reliable figures on this matter, I should estimate that less than 20 per cent of the entire class carried on any sustained collateral reading during this last year.

I regard this as a deplorable state of affairs. It represents, I should say, the weakest feature of our course. Though I believe in "education through opportunity, not compulsion," I feel that today and locally it would be safer to reserve this policy for the higher classes, and to employ a more rigorous method with the entering Freshmen. The student's failure to do collateral readings can be remedied in an obvious way. In advance of, or in connection with, any series of lectures, the students can be told which pages or chapters of the collateral readings they are to be held for. Subsequently, a few of the questions in our written quizzes can be based upon these assignments in the collateral readings. For several years I have urged this and have actually done it myself in connection with a few of the sections of the course, but have not received co-operation by the other instructors. It would require extra work by the instructors, but this extra work would be justified, I believe, by the resulting improvement in morale of the class as a whole. For, at present, the majority of the class consists of slackers in the matter of collateral readings, and such a situation is demoralizing.

At the close of each series of lectures there is a day for open conference. For fifty minutes the lecturer is subjected to questioning by the students. These conferences are not organized or regulated in any way. The students take all the initiative, simply raising their hands and asking questions of all sorts on, or related to, the subject.

Before I had any first-hand contact with this course, I was frankly skeptical as to the success of these open conferences. At my first open conference I was amazed, and I have continued to be pleased by the numerous open conferences that I have attended

since. Many of the students in the class are simply bubbling over with interest, alive with intellectual curiosity. Most of the questions they ask are intelligent and profitable. The biggest problem in connection with the open conference is to get a reasonable number of the questions answered before the bell rings. And often there is quite a swarm of students continuing to ask questions after the bell has rung.

On the day following open conference, the class is broken into sections of thirty students each, which meet separately. Each section is directed by an instructor who is permanently connected with the course. This last year there were four of these sectional instructors, each of whom gave one of the series of lectures before the entire class, and each of whom attended all of the open conferences and all of the lectures save those with which he had already become quite familiar. The sectional instructor meets his own section on sectional conference day and conducts with the students a more intimate discussion of the subject matter than is possible in the large open conference.

In the method of conducting sectional conference, each instructor is given a perfectly free hand. The four sectional instructors frequently exchange experiences and ideas as to technique, but each continues to use his own judgment unhampered in the running of his own section.

In my own four years of experience as a sectional instructor, I have gradually worked out the following method: In many of the sectional conferences which come early in the course, I take most of the initiative myself, and build up an outline of the material under discussion. I attempt to point out the logical interrelationships of the component parts of the outline, and to insure an appreciation of the essence of each component part by asking for volunteer answers to certain critical questions. In this process we always pause to clear up misunderstandings and to discuss the relation of the phenomena in hand with matters of common experience. At the same time I constantly curb wide digressions, for my main anxiety is to cover the outline, and check off each of its related points before the hour is over.

My purpose in using this outline method is to teach the stu-

dents how to organize subject matter, which is a very important part of the technique of efficient study. Since we offer no course on "How to Study," I take it that it is the responsibility of each instructor of entering Freshmen to show them something of this technique. A few of them know this already, but it is never safe for the instructor to assume that they all do. My experience in the College Dean's office has revealed to me many tragedies which result when green Freshmen encounter instructors who assume that they know how to study, and take no pains to show them how.

Our preparation of outlines during the first five or six sectional conferences is quite popular with the students. They copy down the outlines religiously, employ these outlines in preparing for their examinations, and usually see, in the outcome, that the outline has assisted them tremendously.

Later I stop giving them outlines, stating to them that by this time they should have learned to prepare outlines of their own. Thereafter our sectional conferences consist of general discussion, in which the students do most of the talking, and I do relatively little. Fairly wide digression is allowed and even encouraged, for we wish students to make application of the materials of this course to their own life and experiences, and we wish them to cultivate an intellectual curiosity about all sorts of things.

During the first few years of the course, on the day following each sectional conference we gave a fifty-minute written quiz on the subject just covered. Thus written quizzes occurred at the rate of almost one a week. In various ways we were later convinced that this was decidedly too much quizzing. The students were obliged to devote so much of their energy to preparation for, and successful performance in, these quizzes, that there was little energy left for a cultivation of spontaneous interest in the subject matter. So we reduced the quizzing by one-half. Now we have a written quiz after about every two groups of lectures, or not oftener on the average than once in every two weeks. Clearly this is an improvement.

The sectional instructor grades the quiz papers of the students in his own section, and does so with great care and thoroughness. The corrections which the instructor puts on these quiz papers are

often copious, particularly in the early stages of the course. Blunders of understanding or logic are pointed out, method of presentation is criticized, and the student is often urged to restudy certain sections of the text or outside readings. Where inefficient methods of study are revealed by the character of the quiz paper, the instructor suggests improvements in writing or calls in the student for an oral conference. This thoroughgoing correction of the quiz papers is essential to the proper progress of the students, not only as a matter of direct instruction, but indirectly through its effect upon their morale.

At the end of each of the two quarters there is held a two-hour final examination. Most of the examination questions are comprehensive, requiring that the students put together the ideas they have received in several or all of the chapters. This is merely a part of our persistent effort to convince the students of the oneness of all science.

Always the students have some choice as to which of the examination questions they shall answer. For example, they may be allowed to answer any six of eight questions. This is quite appropriate, I think, for the course is prerequisite to no other in the University. We are interested more in principle than in detail, and wish to encourage students to devote special effort to any phases of the course that prove particularly interesting to them.

Students who have made a superior record on the written quizzes throughout the quarter are excused from taking the final examination. Between 5 and 10 per cent of the students are so excused. Such students are given the grade of A, but others among those who take the final examination may also win the grade of A. This maneuver is relatively unimportant, though it probably does a little more good than harm.

PERSONNEL OF THE CLASS

The size of the class has increased steadily, as indicated: 1924, 60 students; 1925, 100 students; 1926, 120 students; 1927, 140 students; 1928, 240 students.

During the first four years, admission to the class was by invitation only. In advance of their first contact with the entering

Freshmen, the College Deans picked out the best students in the class. As results have proved, our Deans are very successful in making this choice correctly, for they have a completed application form on each Freshman that contains a very comprehensive body of information about him. When the entering Freshmen assemble during Freshman week, Dean Boucher, among other things, describes to the entire group the nature of this course and the system of admission by invitation. During the next day or so each student confers with his own Dean for purposes of registration. If this student is one of the elect, the Dean issues to him an invitation to take the survey course. Over 90 per cent of the students so invited accept, though some require a little more information from the Dean as to the nature of what they may be getting into. No coercion is exerted. If a student refuses the invitation, his place is simply taken by one next on the list.

In 1928, the course limit was raised to 240. Of this number 120 were recruited by the usual method of invitation. The other 120 were made up from those others who expressed a special desire to take the course, though none from the very poorest of our entering Freshmen was admitted. For sectional conference purposes, the 120 elect and the remaining 120 were assigned to separate sections. Thus each of the four sectional instructors handled one "good" section of thirty students and one poorer section of similar size. The entire 240 met together for lectures and open conference.

Thus last year we set up a special experiment which might serve to determine whether our survey course is appropriate for high-class students only or whether it also is appropriate for average students. On the whole, I am inclined to believe that the course has proved appropriate even for average students. Except for a few of the "dumbest of the dumb," the students showed by their quizzes and examinations that they were getting a fairly satisfactory grasp of the main points and principles that we were trying to put across. Of course the good students remembered more of the details, and showed a greater facility in applying the principles to new situations, but what the poorer students got was far from being worthless. Certainly the average students were not out of their depth in the course, save possibly for the physics and chemistry,

in which the presentation should be and can be simplified or diluted.

Attention in lectures and open conferences has been as near perfect as could reasonably have been desired, prior to 1928. In 1928, attention was imperfect but not poor. It is conceivable that this falling off in attention may be due primarily to the presence of the 120 unselected students. If so, it is probably due to a benighted dozen of these 120 rather than to the group as a whole. For the future I should recommend early identification and ejection of one or two bad actors for the benefit of, and for its moral effect upon, the rest of the class. This is an expedient that I, and probably the rest of you, have sometimes employed with considerable success in large classes of our own.

Yet I am inclined to believe that the 1928 lapse in attention and consequent drop in general morale is more likely due to one or all of three other causes. Sheer number is one. A mild-voiced and gentlemanly university professor often cannot retain the attention of 240 eighteen-year-olds where he could do so very easily for half that number.

Shape of auditorium is another contributing factor. Before 1928, we met in a compact amphitheater, which focused the attention beautifully. In 1928, we met in a long, narrow auditorium. The students in the back of this room were in about as intimate contact with the lecturer as are the inhabitants of the upper gallery with the actors in a theater.

Third, in the 1928 auditorium there was a tremendous glaring clock which hung over the head of the lecturer like the sword of Damocles, and notified all of the youthful coeds when it was time to start getting their wraps together and making up their faces for the next class.

In summary, I should say: (1) that average students as well as good students are quite in place in our survey class; (2) that the ideal number is more than 140 but possibly less than 240; (3) that amphitheaters are the best form of lecture-room for this purpose; and (4) that all clocks should be removed from the classroom.

"The Nature of the World and of Man" is here to stay at the

University of Chicago. One wonders whether it would be possible for a single instructor to conduct this course successfully at another institution. It would be less impressive given that way, but in some respects there might be improvement. It would be still more coherent and less repetitious. A good teacher could swing it, though probably not in the face of any considerable opposition by his colleagues.

In fairness to the students and in fairness to the institution, "The Nature of the World and of Man" should be followed and balanced by a sister-course in the social sciences. For two years there existed such a course in this institution. It was adjudged a failure and was discontinued. But its failure was almost certainly due more to mismanagement than to any inherent inadaptibility of the subject matter. We hope that this sister-course on "Man and Society" will be reopened under new management. I feel confident that it should follow rather than precede "The Nature of the World and of Man." Logically, as well as chronologically, it is fitting to study first the world, then man as an animal, and finally man as a social being.

CHAPTER X

A REPORT OF THE COLUMBIA EXPERIMENT WITH THE COURSE ON CONTEMPORARY CIVILIZATION

JOHN J. COSS

The course on contemporary civilization given in Columbia College since 1919 was originally a required course meeting five times a week throughout the Freshman year. Beginning with September, 1928, the course became a required two-year sequence, meeting five times a week in the Freshman and three times a week in the Sophomore year.

The course is an introduction to some of the social problems of the present—economic, governmental, national, and international. It is also an introduction to some of the intellectual trends of the present—scientific, religious, and cultural. The development of our present civilization, from the Renaissance through the industrial and intellectual revolutions to the World War and after, is given in sufficient detail to throw into relief the chief characteristics of our age. It is a machine age, an age of mass production for world distribution. It is a democratic age in which each economic group is more or less integrated and effective in its participation in the determination of public policy. It is an age in which the application of investigation and exact methods of discovery and control are spreading to the whole of man's activity.

Some of these present characteristics are so strikingly illuminated by contrast that enough medieval thought and life is introduced at the outset of the course to show the new against the background of the old.

Put briefly, the course is an attempt to ask: What are our social and intellectual worries; how do we come to have them; what attitudes can we take toward them; what promising solutions can we find for them?

The World War may be said to have occasioned this course. During the war, Columbia and many other colleges had a war-

issues course. With the close of the war we asked, "Are there no peace issues?" The course is an attempt to discuss some peace issues, on an informed and fairly dispassionate basis.

The war, furthermore, had set us to asking, "Does this college education get in very close touch with the actual world in which we live? Do we talk very directly about how men make a living, how they live together, and how they understand themselves and the world, and how problems arise out of these efforts?" The war rather tended to drive us out of the academic and into the actual.

Beside all this, the war brought searchings of the heart amongst the teachers of the social studies. They saw that government and economics, and modern and contemporary history, and the more historical and socially minded types of philosophy, and the more applied types of psychology and anthropology and geography were all discussing the same things—the social problems of men. The next step was taken when they said, "Let us teach these social problems, and call on our particular specialties for light; and let us all do this together, each making his contribution and submitting to criticism from the others." The task of treating social and intellectual problems against the background of our past took the center of the stage; and insistence upon departmental sequences and completeness of detailed presentation and the planning of courses with a view to professional preparation faded. The fact that all the social studies pooled their resources kept the treatment non-departmental, for each specialist was interested not only in holding up the hands of his fellows but also in keeping his fellows from putting their own specialties too much in the foreground. As long as all were engaged in the study of one problem, no one could charge that another department was getting a lion's share of attention. The effort became generally co-operative because the objective seemed eminently worth while.

The practical step which the departments concerned took in 1919, under the leadership of the dean and the Committee on Instruction and with the sanction of the faculty, was the discontinuation of certain required courses totaling six hours, i.e., logic, introduction to philosophy, and modern European history, to make room for the new Freshman five-hour course. In 1928 when the Sopho-

more course was introduced, the Department of Government and of Economics each discontinued its traditional first course (not required but widely elected) in order to pool their interests in the new required three-hour Sophomore course which treats some of the contemporary problems of America, involving at every turn questions of economics and government alike. More advanced technical courses will be given in these departments to Juniors and Seniors.

One may ask why the faculty chose the material of the social sciences for the required survey course. There are practical and theoretical reasons. The social science staff wanted to make the experiment. The pure science staff did not. In fact, they thought that a survey course was not in the genius of their subject matter since laboratory work was the essence of science. Logic, in the sense of general training in the accurate use of the mind in a variety of subject matters, was not urged as the required subject for two reasons: Our teachers of logic had become skeptical of the effectiveness of formal logic as an instrument of general training, and they further felt that in a curriculum in which time is a limiting factor and choice must be made, preference should be given to the problems of human conduct, the conditions of their rise, and their attempted solution. The post-war air was full of social perplexity. The preoccupation of men with problems of human well-being is scarcely less today. The situation called for new treatment and the instructors in the social studies wanted to try to work out a new type of training. In Newton's time the story would have been different; in Thomas Aquinas's "Paris" the solution would have been different still. Our own times dictated the content of our experiment.

Another question arises: "Why not give separate required courses in history, philosophy, economics, government, and so on?" The answers are: first, courses in all of these subjects, satisfactory to departments, would demand so many hours that they could not *all* be required; second, each subject treats from its own angle much the same material, and by pooling knowledge, points of view, methods of approach, and joining in a common attack on our problems and their understanding much time can be saved and, in

addition, each subject can make its essential contribution count, and count as never before, since it both stands among and is supported by other converging points of view.

There is a unique advantage attendant upon co-operative effort to construct a survey course, the objective of which is the consideration of contemporary social and intellectual problems and the content of which is material drawn from social and economic history, historical and economic geography, psychology and anthropology, history of science, art, philosophy, literature, economics and government, religion and ethics. The advantage is that subject matters, generally treated in isolation and scarcely ever shown in their dependence upon, or contribution to, other fields, are of necessity all interwoven about the key questions: "What are our difficulties; how did we get them; what are we going to do about them?" Compartments break down and information and method are pooled when a new objective outside any one department and concerned with the problems of the present becomes the center of attention.

Again a question arises: "Do not all of these subject matters lose from their own courses some of their most interesting material by this method? Students who by this new plan may learn the key points of many departments feel that they know all they need to know, and never go near the departments which have so unselfishly given of their best." If the answer were, "Yes, this is all true," one might still wonder if the student might not benefit by this concentrated interest more than by many independent studies in each of which a few of the many points of interest were given as a chief attraction. In colleges, at least, one might well expect the emphasis to be on the benefit to the student rather than on the benefit to the subject matter. But the answer is not "Yes"; it is "No." Students in this course do actually find a liking for the subjects under discussion, or else the general interest of our times supplies a liking which the course at least does not kill. Be that as it may, since the course was started twice as many elections in the social sciences have been made as there were before the course was introduced. The size of the College has remained the same.

When the course in contemporary civilization was begun many

people asked why so difficult and mature a course should be put in the Freshman year. Some said that it might rather be put in the Senior year. The answers to these questions are several, and of different kinds. One practical answer is that the two courses given up were Freshman and Sophomore requirements and the new course took the places of the old. Another practical answer is that in Columbia College many students take two or, at most, three years before entering a professional school, and for such students the course had to be given in the Freshman year. These reasons of compulsion are matched by reasons of intelligence. The course should come in the first college year to mark the break with high school. The questions raised in the course are more searching and the type of material taught as background more mature in its economic and philosophic approach than any work done in high schools. The course is a sort of initiation into the serious side of going to college. Many students have told us that the course has been an intellectual milestone for them. The course, furthermore, should begin in the first year because it integrates and co-ordinates social studies and gives a common matrix from which each, separately studied, may develop. Each social study yields more in its subsequent prosecution because it is seen to have a relevance to reality. A corollary to this fact is the obvious necessity of building all the program of social studies on the foundation already laid in contemporary civilization—of this more later.

This particular course should not be taught in the last year because it could not be taught there and hold the attention of students. Too many of the items which are included in the course would be familiar to students. A seminar course, elective in the curriculum, could be given in which the co-ordinating elements in the social studies might be considered in a methodological fashion. A Senior seminar might well be offered to students who had taken contemporary civilization as Freshmen and Sophomores, a seminar in which the Seniors would work with a staff group representing economics, government, philosophy, and history, and each year reconsider and re-work and re-write some part of the syllabus and

text of the two-year course. Such a seminar we hope to establish at Columbia.

At the outset of our work upon the course and continuously thereafter many people have asked the question, for them rhetorical, "Isn't the course superficial?" My reply has always been "No! It is selective. It selects and emphasizes facts and opinions all with one purpose—to throw light on the present and its problems. It is not attempting to teach history or the history of philosophy or art or literature, or economic theory or the principles of sovereignty. It takes material where it can find it to develop in Freshmen some knowledge of how things came to be as they are, and to bring about a critically tolerant but hopefully informed opinion as to the ways of going about making things different."

Finally, some people said, "But you can't make such a course." Others said, "You can't teach such a course." But for ten years we have been making and teaching it; so, perhaps, both are possible. Nearly all of our students think that it is possible and profitable.

THE CONTENT OF THE COURSE

THE FIRST YEAR—THREE IMPORTANT PHASES

1. How nature conditions man—geographic factors in civilization.

2. The culture concept—man in society and the sum of his experiences, instruments, and institutions. The notions of social pressure and of the development of customs and instruments of physical and social control.

3. The course of European history from 1200 to 1929 with emphasis on three main points: how men make a living; how men live together; how men understand themselves and the world about them.

Obviously this material requires a chronological setting, and some framework of political history. We use Hayes' *Social and Political History of Modern Europe,* Volume II; a variety of economic histories; Randall's *Making of the Modern Mind;* Carman's *Economic History of the United States;* Storck's *Man and Civilization;* and we have written many sections and printed them as a part of the syllabus for the sake of brevity, clarity, and point.

Some day we may write texts that meet our needs better than anything that has been published. Five texts have been written but none is an absolutely perfect fit. This is partly due to the fact that the syllabus is subject to constant revision in detail. The main plan is unchanged, and yet we have had seven editions in ten years. Besides the books already named, all of which the students buy, we use references from some twenty other texts, which are bought in lots of thirty-five copies by the College and placed on reserve in the Study.

THE SECOND YEAR—SOME PRESENT-DAY PROBLEMS IN THE UNITED STATES

The second year of contemporary civilization is the study—not the solution—of contemporary problems in the United States. These problems, while pertinent to the same three sets of interests —how people make a living, live together, and understand the world—as the first year of study, are approached from the focal point of the first of these, i.e., how people make a living. The organizing hypothesis of the course is that modern industry, expanding at a constantly accelerated rate, has wide ramifications with important consequences to individuals and society.

Thus, the second year of study commences with a description of modern manufacturing methods and processes, the techniques of selling and distributing goods, and the typical organization of capital through the corporate form. Consideration is next given to the interrelationships—such as those embodied in contracts and trade associations—between business units and also to the relationships between business concerns and the credit structure.

Various groups and interests which are affected by modern industrialism are next studied in some detail. These include: consumers, wage-earners, agriculturalists, weaker competitors, and the broad social interests in natural resources and public utilities. Various governmental bodies and agencies come upon the scene as they are invoked in connection with the specific problems under consideration. Thus, for example, the regulation of railroads by the Interstate Commerce Commission is studied in connection with public utilities, and the new Agricultural Marketing Act is examined with reference to the problems of agriculturalists.

The international aspects of industrialism are studied next. The forms and trends of foreign trade, international finance, tariffs, the international cartel movement, and national policies with reference thereto are surveyed.

From this we proceed to an examination of the part played by law in the contemporary scene. The American faith in, and dependence on, law, the problems connected with law enforcement and court procedure, and the relations of crime and crime-prevention to the industrial and social setting are studied.

Contemporary standards of living and the means that are used or are available for raising these standards are surveyed. Separate study is given to urban and to rural standards.

The costs of the functions of government are next taken up. Attention is given to the kinds and amounts of government expenditures and to the methods at present in use for securing revenues to meet them. This involves a study of general property, income, inheritance, corporation and business taxes, excises, import duties, special assessments, and fees of various kinds. Attention is given to the effectiveness of various systems of taxation and to their effects on various group and business interests.

Lastly, contemporary attitudes toward the industrial system and its concomitants are studied with reference to the facts which have been learned. Both the adverse critics and the apologists are given a hearing.

Texts for the second year are, in part, bought by the students and in part by the College. A book of readings selected from a very wide range is being published to accompany the syllabus of the second year.

THE ADMINISTRATION OF THE COURSE

MAKING THE SYLLABUS

In the introduction of any survey course it is essential that there be members of the staff who understand the problem to be attacked and who want to solve it by working on it themselves. Few institutions, if any, at this time can take over a survey course developed elsewhere. Local conditions, including the interest of the persons making the syllabus and also the local "pillars of Her-

cules," affect the successful introduction of a course so much that each college should make use of all available material but should make its own syllabus. I say this in spite of the fact that the Columbia syllabus is used elsewhere, used even so far away as Cairo and Hawaii.

The making of a syllabus locally has an additional virtue. In the making, the nucleus of originators, and, in the revision, the staff subsequently added, learn to work together, to put in, or take out, material in view of a desired and conditioning purpose; and they also learn the available materials in the field. The course is always an educational affair for the teachers. A part of the education is the making of the syllabus. Sometime this emphasis on a home-made syllabus may not be so essential as it is now.

THE SELECTION OF THE STAFF

The teaching staff of contemporary civilization is made up of members of the Departments of Economics, Government, History, Philosophy, and Psychology. There is no inherent reason why anyone competent—no matter where assigned in the university—should not teach. Two of our administrative officers well trained in history and philosophy have participated in the course.

The appointments in Columbia are made by departments. No man who participates in contemporary civilization is selected by the contemporary civilization staff alone. All instructors are departmental choices. Fortunately, however, departments confer with the dean and with the contemporary civilization staff before making appointments, and very often men are appointed, in part at least, because they are recognized as of sufficiently broad training and interest to want to become members of the staff of contemporary civilization and because we think that they are well qualified for the work. The staff numbers from twenty to thirty each year. Each year there are some changes. In ten years there have been three decided misfits.

In making the teaching program for a member of the contemporary civilization staff, attention must be given to the development of the teacher himself and care must be taken to advance his detailed as well as general training. The contemporary civilization

course is a fusion of many fields. It is not desirable, either from the standpoint of the course or of the individual, that anyone should teach in this course alone and not go on for further scholarly work in one of the contributing fields. Academically, advancement cannot come as yet for one who is merely a trained teacher of this course. Advancement still comes within the traditionally established departments, although success in teaching in contemporary civilization is a factor in promotion.

The ideal program for a teacher of contemporary civilization is five hours of first-year teaching or three of second-year, one standard course in the department of appointment, plus a special course of personal interest in which the teacher presents the results of his own continued and intensive research.

When the research of a teacher in contemporary civilization or his load of departmental teaching becomes too heavy, he stops teaching contemporary civilization. But he carries to his departmental teaching and to his more restricted research a point of view catholic in its understanding and breadth. The course trains a new kind of thinker and worker in the social studies.

THE TRAINING OF THE STAFF

There is no teaching under supervision and little visiting of instructors. I do not defend this; I just state what the facts are. On the other hand, in Wabash College which has a contemporary civilization course they add to their staff two instructors who visit but do not teach save in emergency. These visitors meet with the entire staff and give their impressions of the work of the various instructors and classes. This plan seems to work without friction.

At Columbia, new instructors and old are well provided with the mechanisms of well-regulated instruction. The year's calendar of assignments and examination dates are available in the fall. The syllabus on which the course is organized is detailed and explicit, and contains required daily assignments and suggested readings as a part of the text itself.

Exchange of opinion and question between members of the staff, old and new, there is plenty. We lunch together weekly, we

camp together at Easter, we visit back and forth in our offices, most of which are in one building. Four members of the staff have been through the course as students in the College.

THE TEACHING METHOD

There is no formal lecturing in the course. The subjects may be presented by the instructor or developed by the class, or both—usually both. Questions are asked from desk and bench. Reports are frequent in some classes, essays less frequent. Each term has three fifty-minute examinations of which at least two are objective. The final examination of each semester has an hour essay on one of ten topics given to students six weeks before the day of the final, and, in addition, a two-hour objective examination. There is little restraint in classrooms and the question of discipline does not even arise in more than five cases out of 450 students in the year. New men usually have the syllabus a full summer before they join the staff, and because of this they can read in the new fields before they begin to teach.

THE CONTINUITY OF TEACHING

The course contains material from many fields. No instructor is an expert in all fields. Yet we do not divide the course and ask each man to teach only that part which is his specialty. Each staff member has a class of thirty men for the entire year, and when material is not his specialty he works harder and learns more than when it is. The students may learn a little less. We feel that this fault is compensated by the values of continuity of plan and interest and classroom acquaintance. Usually a staff member has the same thirty boys for both semesters. This plan may be altered and we may change sections at the mid-year. Each man would then have his students seventy-five times a semester in the first year or forty-five times a semester in the second. The period is fifty minutes. Sometimes we put all sections at a single hour together and ask a specialist to lecture. This is not done frequently, for we find that the specialists often fail to hit our target. We may ask members of our own group who are specialists to take such meetings next year. This arrangement has certain advantages, in theory at any rate.

THE PARTICIPATION OF STUDENTS

Each section elects entirely on their own nomination one man to represent it for one semester. He meets alone with the class and then all class representatives hold a meeting. They talk over the whole course, its pros and cons, teaching method, examinations, texts, emphasis, objective, and all manner of things.

Each semester all the staff and all the representatives dine together and after dinner make a detailed report each to the other on all the points the students bring up, and many more. These dinner parties are encouraging indications of student interest and sobriety of judgment. To be a representative is an honor and the duties are well discharged.

THE CO-OPERATIVE CHARACTER OF ADMINISTRATION

The courses in Contemporary Civilization A and B, the two-year sequence, are not under the jurisdiction of any department. They are the responsibility of the dean and the Committee on Instruction. For internal administration there is a chairman of the group, but all, quite literally all, decisions are made by the group. There could scarcely be conceived a more completely co-operative enterprise or one in which each member of a group carries more adequately his part of the load.

TEACHING AND ADVANCEMENT

As has been stated previously, advancement in rank and salary in Columbia as in most institutions is through departmental recommendations. Columbia may be somewhat exceptional in that all departmental recommendations go to a Committee on the budget, advisory to the president, for consideration and co-ordination. Of this Committee the dean of the college is a member, and his knowledge of the teaching record of each member of the College staff supplements the reports of the individual departments.

THE INFLUENCE OF THE COURSE ON THE CURRICULUM OF THE SOCIAL STUDIES

The general influence of this course on the teachers of the social studies is impossible to gauge. The reason is that the economist

who teaches in the course has become interested in psychology and in government and history and cannot teach his material in the same way, not even if he is teaching the same course as existed before he taught in contemporary civilization. The philosopher is distinctly humanized and the historian becomes an economic, political, psychological, and philosophic interpreter all at once. This course is really quite hard on the instructors.

The explicit influence of the course on the curriculum of the social studies is to disestablish other requirements in the field and to cause the Departments of Philosophy, Economics, Government, and History to reorganize their basic courses and take into account the two-year advantage which each has as the introduction to his own course material. The amount of work required for this reorganization is so considerable that two or three years will pass before a thoroughgoing adjustment can be made.

THE SPREAD OF THE SURVEY IDEA

There is so much that students want to know; there are so many clearly indicated points of major interest and so little time in a four-year program, to say nothing of a three or a two-year program, that there is a tendency to offer survey courses in many individual or associated fields. In Columbia there are now offered courses which are unions of varied subject matters and, in addition, courses which are general and sweeping treatments of large fields. In a sense, both of these types of courses may be called survey courses. The history of the sciences, the histories and philosophies of religions, the sweep of European literatures, the history of architecture, sculpture, and painting—all these are indications of the spread of the survey idea.

Columbia College counterbalances these general courses—which may be taken in any year, but are usually Sophomore and Junior electives—by requiring for graduation a certain number of courses from a more detailed and more intensive group. A plan that many students will follow provides for a Senior year of intensive study in one field or on a topic requiring minor excursions into a number of associated fields.

The idea that lies back of the survey course is sound. It is that college students should become acquainted with a selected and interrelated group of facts, opinions, and problems in a number of important and interesting fields. Of all the fields, that of our social problems seems the most insistent at the present time. It is for this reason that two years are given to the introduction to contemporary civilization and that the sequence is required of all students in all schools.

CHAPTER XI

A REPORT ON THE STEPHENS COLLEGE EXPERIMENT WITH A SURVEY COURSE ON AESTHETICS

LOUISE DUDLEY

The survey course in aesthetics which is the subject of this report is one of the fundamental courses in the Stephens College experiment with the curriculum of the four-year junior college and as such belongs in the first year's work. In that year the student is given three orientation courses which constitute a survey of the entire field of knowledge. One of these is in the natural sciences, one in the social sciences, and one in aesthetics, or the humanities, as the course is known at Stephens. The humanities, or humane subjects, are those that give enrichment and understanding of life in contrast to the natural sciences, which treat of the physical background for life, and the social sciences, which tell of man's relations with his fellow-men. Theoretically, the humanities include all the arts, philosophy, and religion. Practically, the course is limited to the major arts: literature, music, painting, sculpture, and architecture.

The purposes of the course are two:

1. Increase in appreciation of the fine arts.

2. Knowledge of each art as a whole and of the relations between the arts.

The problem of teaching appreciation involves some of the greatest difficulties in the study of the fine arts. To my mind *appreciation,* which is another way of saying *enthusiasm* or *liking,* cannot be taught. It can be communicated; all of us are debtors to those of our teachers and friends who have communicated to us their own love for a subject. The teacher must himself appreciate the fine arts, but he cannot go before a class with only the idea of communicating his appreciation. If he does, his teaching is apt to become a rehearsal of vague generalities. He must have solid stuff

to teach, and in his presentation of this his love for the subject will make itself felt. In other words, the communication of appreciation is primarily a by-product.

The next question, then, is "What shall be the nature of the knowledge taught in a course on the fine arts?" The answer was sought in the reasons for lack of appreciation. These are primarily inattention and failure to understand. No one can appreciate a great work of art unless he understands it at least in part, and he cannot understand it unless he gives it careful attention. This statement is obvious and trite. Yet like most obvious and trite sayings it is commonly disregarded, and, even the otherwise intelligent person will walk through an art gallery, for example, glance at the masterpieces, and pass on. He does not pay any special attention to the pictures because he does not know what to look at; a glance shows him all that he had learned to see. He would probably like the pictures if he would look at them long enough, but he does not see anything to hold his attention for more than a few seconds. Therefore, to make him pay attention to the pictures we must teach him what to see; in other words, we must help him to understand.

Understanding may be knowledge of the literary and historical background or knowledge of the techniques. Interest of the student in a painting by Raphael, for instance, may be aroused by the story of the life of the artist and the conditions that attended the painting of that picture, or by a study of the painting itself, its use of line, color, and light and shade. For any thorough understanding both kinds of knowledge are necessary. For the course in humanities major emphasis has been put on techniques for two reasons. First, the student needs more help in learning techniques than in learning literary and historical backgrounds. The material necessary for the literary and historical study is easily available, and almost everyone is familiar with that method as an approach to art. Therefore, even the beginner can use it without great difficulty. On the other hand, the material necessary for a study of techniques is not readily available, and the average student has had no experience with that approach to art. For these reasons he needs the help of an instructor. The second reason for emphasizing techniques rather than historical and literary background is the belief that

techniques are fundamentally more important because they involve the study of art itself. After all, if Raphael's paintings are great, the reason lies primarily in the paintings and not in any facts about the artist's life. Therefore, the teaching of techniques has been made the cornerstone of the attempt to teach appreciation. These techniques should, however, be taught for knowledge, not for skill. To a certain extent knowledge is dependent on skill; students learn points about drawing and music more easily when they themselves attempt to draw and to compose. But any skill they acquire is purely incidental; they are not learning techniques that they may be good performers, but that they may understand the performances of others.

The first purpose of the course in humanities, then, is increase in appreciation, and this increase in appreciation is sought through knowledge of techniques. The second purpose of the course is knowledge of the subject as a whole. An orientation course in the fine arts should give an understanding of the relations between the various arts; it should also give an understanding of each art as a whole. Most of our knowledge is piecemeal; we learn a little of this and a little of that; and we never get the broad overview of a subject in all its relationships.

The giving of such an overview is, of course, the general purpose of all orientation courses. In no field is it more important than in the field of the arts, for nowhere has there been more of the abracadabra of technical knowledge. Artists have talked about "art for art's sake"; they have insisted upon the judgment of art by artists until the average person without technical training has been thoroughly cowed; he is reduced to the stage at which he thinks he cannot understand and feels that he dare not criticize. "I don't know much about art, but I know what I like" is one of the most foolish statements ever made and one of the least true, but it represents accurately the servility of the average person in his attitude toward art.

Art can be judged best by the person with a knowledge of art just as mathematics can be judged best by a person trained in mathematics. Furthermore, there is the element of inspiration in art. The artist does consider three sounds and out of them frames,

"not a fourth sound, but a star," as Browning says. But this inspiration is an unknown quantity even to the artist. The tones out of which the artist frames, "not a fourth sound, but a star" are just the tones of ordinary people and ordinary life. And those tones the uninitiated can study and can understand. He cannot get all knowledge in one course, but one course can take away the mystery and give him an intelligent understanding of the important principles of each art.

Moreover, the overview is important because our knowledge of the arts is even more fragmentary than our knowledge of other branches of learning. In all the arts except literature emphasis has been placed predominantly on skills rather than on understanding. Even in the field of literature, poetry, grammar, and composition are studied as separate subjects, and the student does not always see them as parts of one whole.

The organization of the course is designed to make it serve the two purposes stated. After a very brief discussion on art in general, there is an overview of the techniques of each of the arts. The course ends with a discussion of the fundamental principles of aesthetics and the relations between the arts.

The discussion of art in general occupies the first two or three weeks of the school year. Only a few problems are taken up, and these are treated very simply. Among them are the definition of art as the expression of the artist's ideas, the problems of inspiration and originality, and the difference between the artist and the ordinary person. This introduction includes also a statement of the content of the course as a whole and the ends to be achieved.

The remainder of the year is divided into four periods of eight or ten weeks each. These are devoted to overviews of literature, music, and the visual arts, and to the conclusion.

In the overview of each art, we try to put together the pieces and let the student see each art as a whole. Literature, for example, is studied both as sound and as sense. The sound of literature may be important as rhythm or as tone color. We are in the habit of recognizing rhythm in poetry, as in these lines from Masefield,

I must down to the seas again, to the lonely sea and the sky,
And all I ask is a tall ship and a star to steer her by,

And the wheel's kick and the wind's song and the white sail's shaking,
And a grey mist on the sea's face and a grey dawn breaking,

. . . . . .

I must down to the seas again to the vagrant gypsy life.
To the gull's way and the whale's way where the wind's like a whetted knife;
And all I ask is a tall ship and a star to steer her by,
And quiet sleep and a sweet dream when the long trick's over.

—JOHN MASEFIELD, "Sea Fever"

In a song like this we notice the swing of the verse, the rhythm; we are less conscious of the effects of sound which, for want of a better term, are called tone color. But in this song much of the charm lies in the tone color. Notice the repetition of *s* sounds in the second line,

And all I ask is a tall ship and a star to steer her by.

Substitute words with the same meaning and the same rhythm as those Masefield used, but without the *s* sounds,

And all I want is a tall boat and a star to guide her by.

The line has lost its charm. In the last stanza also,

To the gull's way and the whale's way where the wind's like a whetted knife,

the second line makes a whizzing sound such as the words describe.

In the study of literature considered as sense, grammar states the rules which indicate the relationships between words. By means of grammar we are able to understand what words mean when they are put together in sentences. Organization, which contains the bugbear of the logical outline, is only the easy way of enabling others to get the sense of larger units when sentences are put together in paragraphs and whole compositions. On the basis of organization and content different works are classified according to type as lyric, romance, novel, epic, and so on. By means of imagery the author gives the reader clear mental images of the subjects about which he is talking, "the wheel's kick and the wind's song and the white sail's shaking."

Rhythm, tone color, grammar, organization, types of writing, and imagery, these are the divisions of an overview of literature.

The overviews of music and the visual arts are similarly planned, but they will be discussed here less fully. Besides the fundamental laws of rhythm, melody, and harmony, the overview

of music distinguishes the main types of musical composition—song, sonata, and fugue. It also explains something of the physics of sound, the difference between musical tones and noises, the qualities of tones which are distinguished as pitch, loudness, and timbre, how sound is made, how it is carried, increased, and reflected. In conclusion, the overview shows how these characteristics of sound are utilized in the various musical instruments, and it explains the particular advantages and disadvantages of each instrument.

The overview of the visual arts—painting, sculpture, and architecture—explains first the three elements of visual art—line, color, and light and shade—and the use of these elements in the general principles of design and representation. Design is the use of form as form without significance other than its pleasing quality; representation is the use of form to imitate or interpret something in the world. A painting of a man is an example of representation; the carving of a picture frame, an example of design. The overview ends with a discussion of the materials used in each art and a summary of the great styles.

The conclusion, which occupies the same length of time as the overview of each art, is the most important part of the course. Since the student is familiar with the techniques, he is ready to discuss the limitations of each art, and to perceive the kinship between the arts. Here emphasis is laid on the unity of all art. The artists express themselves through different languages, but all are alike in having as their purpose the expression of their ideas so perfectly that men will pause and consider and understand.

Throughout the course literature has been used as the foundation for the study of the other arts, partly because it is the art with which the instructor is most familiar, but more particularly because it is the art with which everyone is most familiar. For the same reasons literature has served as the starting point in the collection of material. The study of literature led into the field of aesthetic theory, and the study of general aesthetic theory led to the application of that theory in the several arts, including a study of texts on different phases of each art. I have had considerable difficulty in getting the material I wanted on music and the visual arts. It is

easy to find histories of each art, but books on technique are usually written for the student who wants to learn skills. Books on harmony and counterpoint, for example, are almost always written to teach the student how to write music. In general I have found the philosophies of music and art more valuable than any other type of text in giving the point of view needed for the course. In the collection of material I have been greatly aided by experts in each field who have checked both the facts and the bibliographies compiled.

In the presentation of material, emphasis is placed on the student's ability to use facts or theories rather than on memorization. Only a few points about presentation call for individual attention. First, the young students are much more interested in fact and in detail than in theory. They have great difficulty with theory when presented as theory. When theory is presented as a generalization from a large number of facts, they grasp it readily. An illustration may be taken from the study of sculpture. This study, as experience has shown, is usually difficult. The students know statues almost entirely through photographs, and the picture of a statue does not differ particularly from a picture of a painting. Therefore, the students have difficulty in understanding the distinctions between painting and sculpture. This year the members of the class were told to carve statues from cakes of soap. The work that was handed in was sufficiently varied to illustrate all the different types of sculpture. Moreover, with the soap figures before them the class grasped easily the important points about sculpture, such as the importance of light and shade, the value of line, and the necessity for a statue to be interesting from more than one point of view.

Second, the students are interested in original work, provided the problem is narrowly limited. If, for instance, they are told to compose a song they are helpless; but when they are told to compose a melody in a three-tone scale or to make a new melody by combining phrases from other songs, after the manner of some of the popular composers, they bring in interesting compositions. In general, however, better results are obtained from the works of masters than from original compositions. This point holds true for art and literature as well as for music.

In the study of the visual arts I borrowed a method from a course given at Harvard in the summer of 1928. When I explained each type of design, I asked the students to bring in examples of that design from nature and from man-made objects. They found examples in everything from rattlesnakes' skins to butterflies' wings, and from Greek vases to cloth of ancient Peru. This was the most successful single device used in the course. It taught the students to be observant; it gave opportunity for the exercise of taste in the selection of examples; and, in the search for illustrations from man-made objects, it insured familiarity with great masterpieces.

Something might be added about the teaching of skills and terminology. What I have to say on this point is similar to the boy's composition on snakes in Ireland; there was no teaching of skills. In the case of the soap statues I told the members of the class to carve statues from soap and allowed those who knew something of the process to discuss techniques, but there were no further instructions. In the case of the drawing of designs, I gave a few simple instructions about materials and I announced that the work would be graded chiefly on the interest of the designs chosen. The results were satisfactory and proved the contention of all teachers of music and art that the difficulty is not so much in training the hand to perform as in training the ear to hear and the eye to see.

A word of explanation may be necessary with regard to terminology. When a new division of a subject was introduced the students were given an explanation of the new terms. They were not told at the start that they must learn this or that word, but they soon became familiar with all the important terms through frequent use. When a division of the subject was completed they were asked to decide which terms were so important that everyone should know them. The list they chose was then required of the entire class.

When an experiment similar to the one under discussion has been carried on for only two years, it is obvious that no final evaluation can be made. The course is changing every year, and the value of this year's work is different from that of last year because

the course itself has been different. As a matter of fact, the work has never been given exactly as it has been outlined in this report, for I have stated here the plan for next year rather than the actual procedure of last year. Moreover, the work, as I said at the beginning, is planned for students in the first year of the four-year junior college; in other words, for students with the maturity of juniors in high school. But as the class has been taught it has not contained pupils of that grade only. The first year the class consisted of both third- and fourth-year high-school students; the second year, of third- and fourth-year high-school students and first- and second-year college students. How the work would be received by a class composed entirely of high-school juniors remains to be seen. Differences in the reception of the material, however, have seemed primarily individual and personal, and not a consequence of the grade in school represented. Girls with the same ranking on the mental test did comparable work. Exception should be made only in the case of a very few high-school Juniors, who were exceedingly immature, and a few college Sophomores, who had acquired unusually good habits of study. In the final ratings honors went to three high-school Juniors and one college Freshman. It seems fair, then, to say that the presence of others in the class has not seriously affected the value of the experiment for third-year high-school pupils.

But, though no definite conclusions can be drawn, certain trends are clear. The principles on which the course is built seem to be sound. A general survey course can and should be given with its aim, not that of skill, but rather knowledge for appreciation and understanding of the entire field of the fine arts. Moreover, such a course can be taught to high-school Juniors. That it should be given in that year rather than in a later year remains to be proved. The advantages seem to lie in favor of the early year, especially if the four-year junior college becomes an accepted educational unit. The primary advantage is that the student gets his general survey of the entire field first; then he can choose for further study the particular branches that are most interesting to him.

There remain two major problems and two problems of lesser

importance. The first of the major problems has to do with the content of the course. No one can hope to teach in one year all that has been outlined in this report. The question of selection arises: What subjects shall be treated in detail, what subjects treated in less detail, what subjects shall be omitted entirely? The answer to these questions must come, I think, from the people who teach the class. Up to the present my own interest has centered primarily in the collection of material. Nor is that task ended. The testing of material in the classroom has had to take second place. As the material has been used, certain points about teaching have been made clear, as I have indicated. But my experience has not been great enough for me to be certain of results so far as I personally am concerned. And my results will need to be checked by many other teachers.

A more serious problem lies in the difficulty of keeping a balance between understanding of the whole and emphasis on individual techniques. It is not easy to steer between the Scylla of vague sentimentalizings and the Charybdis of detailed techniques, as all teaching of the fine arts has shown. Here the answer lies and must lie with the individual teacher. The administrator may point out the desired goal, textbooks with proper emphasis may help, but the solution lies in the end with the teacher.

Two minor difficulties concern the preparation of the students and the preparation of the teachers. The students enter the class very unevenly prepared. Some are well trained in the visual arts and have no knowledge of music, and others are familiar with literature but have no acquaintance with the other arts, and so on. This difficulty is unfortunately too familiar to all teachers in every subject. When, however, a course is as rich in content as this one, the material can usually be shifted to suit the needs of the class.

The problem of training teachers can be solved only in time. At present the specialization of the college course usually means that the instructor is prepared to teach only one of the arts. He may be acquainted with one or two of the others; almost never has he any thorough training in the five arts he must teach. This condition will change as orientation courses in aesthetics become more

common and as students while in college prepare to teach them. In the meantime the onus must fall on those who, knowing one art, are brave enough or foolhardy enough to begin the study of the others. To them may be assured much hard work and some of the greatest pleasures teaching can afford: the enthusiasm that comes with the fresh acquisition of knowledge, the joy of sharing that knowledge with people who are still eager to learn, and the inspiration of helping them to see with their eyes and hear with their ears. And for those teachers, as well as for the student, the purpose of the course in humanities is fulfilled, and life becomes more rich and more abundant.

CHAPTER XII

A REPORT ON THE STEPHENS COLLEGE EXPERIMENT WITH A COURSE ON WOMEN'S VOCATIONS

ADAH PEIRCE

For the last ten or fifteen years, Stephens College has placed great importance upon individual work with students. The work in vocational guidance has developed partially in the conduct of this individual work, and partially in the development of one of the four orientation courses which President Wood described in his paper on "The Curriculum of the Four-Year Junior College." This means that two phases are being developed in the vocational guidance work at Stephens College: (*a*) an educational and vocational advisory system; (*b*) an orientation course in vocations.

There are two main divisions in educational and vocational advisory work in a junior college: (*a*) the counseling of students concerning their life within the college; and (*b*) the counseling of students concerning their life after graduation from the college. In other words, it is desirable for the student to make the most of her life within the institution; and also to articulate her junior-college work with her life after graduation—realizing that after graduation, she may continue her studies in some senior college, may enter some vocation (e.g., teaching or some one of the business fields), or may identify herself as an intelligent member of the community in which she lives, as she remains either in her parents' home or establishes a home of her own.

Stephens College utilizes its entire faculty in its advisory or guidance work. Each faculty member has ten or twelve students assigned to him, with whom he is expected to keep in close personal contact throughout the school year. The faculty member may select these students from among students whom he has in his classes, or with whom he is closely identified in school activities; or he may accept those students who are assigned to him by the

Personnel Committee either because of some similarity of interests in himself and the students, or by random selection. In his advisory work with his students, the faculty member is expected to become well acquainted with each individual, including a thorough knowledge of her academic interests. Whenever problems arise which he knows he is incapable of solving, it is the adviser's responsibility to see that that problem is brought to the attention of those who are better fitted to work out a solution. If the problem is of a personal nature, it is referred to the Personnel Committee or the Board of Deans, depending upon its nature. If it is an academic problem, it is referred to the head of the department in which the student is doing her major work, to the registrar, or to the dean of the faculty. One of the chief factors which the adviser must keep in mind in dealing with academic problems is whether or not the student is going to continue her academic work after graduation from Stephens College; if so, where; and is she fulfilling the academic requirements for entrance into senior-college work with the rating of a Junior?

The vocational counselor has as her particular responsibility the interviewing of each student in the college; first, to make sure that they have no problems which are not receiving attention; and, second, to help students find in what general field their major interests lie, so that they can be more intelligent in planning their college curriculums, and not be quite so haphazard in the development of their lives after their completion of their college work. So far it has been possible only to check (through interviews) on the unanswered problems of the students who have been members of the Senior class or in their last year at Stephens College, and to aid in the finding of fields of interest through the development of the orientation course in vocations which has been taught to the Freshman class.

A result of the interviews with the Seniors was the evidence that many students who are graduating from Stephens are still too uncertain about their major field of interest to know in what department to continue their senior-college work. An intensive, one-semester course in vocations was given this last semester to a group of Seniors as an attempt to meet this need.

It is the vocational counselor's ultimate aim to have at least one interview with each student during each year that she is at Stephens College, to continue the presentation of the course in vocations to the Freshmen as one of their four required orientation courses, and to give every upper-class student who is uncertain about her interests an opportunity to elect the course in vocations sometime during her work at Stephens College. It is hoped that in this development of the educational and vocational advisory work the students will receive more benefit from their college work, both in school and out.

As has been previously stated, the course in vocations which has been taught at Stephens College has been one of the four orientation courses which have been developed as a part of the curriculum in the experiment of the organization of a four-year junior college. Dean Oppenheimer of our college has told of the way in which our curriculum is planned to fit the needs of the students. This particular need of the students, which the vocations course is designed to fit, is an understanding of the practical application which can be made in everyday life of the information which the students are acquiring in the three fields of knowledge: humanities, natural sciences, and social sciences. The vocations course seeks to do this by showing how the many vocations in professional, commercial, and industrial life, as well as in the home, are constantly needing more information from the fields of knowledge mentioned in the foregoing.

There are four specific aims in the development of this general function of the vocations course:

a) To give the student a clear idea of the necessity of continuing her academic education, because knowledge which is to be acquired in college provides an important background for all vocations.

b) To give the student a survey of the majority of the principal vocations which are open to her so that when she finishes school she can intelligently select the general field in which she is most interested, even though she may have to experiment with various branches within that field before she finally finds the particular vocation which she likes. If she does no more than decide

whether she wants to enter professional, commercial, or industrial work or to remain in the home, she does so with a fair understanding of what the other fields have to offer her, and does not blindly enter some vocation which accidently comes to her attention.

c) To indicate some of the principles which should be followed in the selection of a vocation, e.g., the spontaneous interest which one has in particular fields of knowledge, the education and training which she must have before she can expect to be successful in her chosen vocation, and the personal qualifications which are necessary for entering particular vocations (e.g., the social worker must have a sympathetic understanding of people, and the advertising worker should understand those interests of people which regulate their buying).

d) To give the student information which will help her to plan her college curriculum. It is hoped that at the end of her Freshman year she will, as a result of taking this course, be able to decide upon the field in which she will do the major part of her college work.

There are several reasons for the development of a course in vocations. One of the most important relates to the practical impossibility of any student's learning in the home all of the possible kinds of work which she may do. Originally all vocations were centered in the home. We are all familiar with the history of the home which was built by the father with the help of his family; the grain for food was raised in the fields by the father; the mother ground the grain into flour and made it into bread which the family ate; the clothing for the entire family was made by the mother from the cloth which she wove herself from thread which she spun herself from the flax or wool which the father brought in as a result of his own labors. Thus every member of the family had some part in the preparation of the food, clothing, and shelter of the family. The children learned how to do the work required by working with their parents. In a crude way all the vocations were involved.

Academic education was one of the first professions to be taken outside of the home. It was not until the present century, however, that schools developed which give vocational training in

commercial and industrial fields. The course in vocations gives the student some idea of where she should go to receive the particular type of vocational training which she desires (e.g., if she is interested in department-store work, Mrs. Prince's school in Boston or New York University will give her exceptional training).

The course in vocations also points out that professional training of the best type can no longer be acquired by merely working with one who is experienced in the profession as the former law student worked in a lawyer's office. The professional student must be informed of the special courses which are developed in her specific field, whether it is one of the old established professional fields, such as law or medicine, or one of the newer professions, such as education, social service administration, or library work.

Still another reason for the development of the course in vocations is the need of women for vocational orientation. There has been a decided change within just the last decade with respect to the view that woman's sole occupation is in the home. Other opportunities are constantly opening up for women—in fact, there are very few fields of work today in which there are not some pioneer women. Students need to know what women can and are doing. But what is even more important, girls must realize that as they are having the advantages of more advanced education, they have a definite responsibility to make some application of the information which they are acquiring in some professional, commercial, and industrial work, or in the intelligent development of the home and community in which they live.

The four factors which will now be discussed concerning the Stephens College experiment with a vocations course for women are:

a) The practicability of presenting material concerning vocations as a course.

b) Where such a course, if taught, should come in the students' curriculum.

c) A brief description of the methods used in presenting the course.

d) An evaluation of the course.

The instructor has taught this course in vocations for two

years and is convinced that it is possible to present material concerning vocations as a course, even though there are various difficulties involved.

One difficulty is the lack of written material which gives both accurate and comprehensive details concerning specific vocations. But, as much work is being done in this field in various parts of the country, it should be only a question of time before this difficulty is overcome.

Another difficulty which has to be faced is the variety of interests which the students will always have who are in such a course, and the differences in their preparation for such a course. Their interests depend largely upon their home background, but it has been observed that students from professional homes have found commercial fields more attractive when they have actually understood some of the vocations involved in that field. Other radical changes in interests have also been noticed. But the differences in interest which are the result of differences in academic training are a little more difficult to overcome. This often means filling in those gaps which exist in the individual student's training in such fields as history or English.

A third difficulty in presenting the course is that of preventing the discussion of the specific vocations from becoming mere routine, and thus losing the interest of the students. This difficulty will be more fully discussed under the method of presentation of the course, but it is probably of interest to note here that the danger of monotony can be partially overcome by considering the vocations in related groups (e.g., the health professions, the business vocations, the arts, etc.).

As a part of the four-year junior-college plan it seems logical to present the course to the students in their Freshman year along with the other orientation courses. It is in this way fairly easy for them to correlate the information which they are learning in the three fields of knowledge, namely, the humanities, social science, and natural science, with problems relating to vocations. However, such a course need not be limited to Freshmen; it may also prove valuable to more advanced students who are still uncertain concerning their major field of interest. I do not believe that the aver-

age student below the Freshman year in a four-year junior college or the Junior year in a high school is mature enough to grasp the full significance of the correlation between information learned in school and its practical application in our modern highly organized world.

Two phases will be discussed concerning the method of presenting the course: (*a*) the collection of the materials, and (*b*) the method of conducting the class.

In the collection of materials for the course, it was necessary first to find with what specific vocations the modern woman is concerned. This was done by studying federal and state government bulletins concerning occupations for women, and such books as Hatcher, *Occupations for Women*; Bureau of Vocational Information's study, *Training for the Professions and Allied Occupations;* Filene, *Careers for Women;* Adams, *Women Professional Workers;* and quite recently Doris Fleischman's new book, *An Outline of Careers for Women.*

Material concerning specific vocations has been selected from the bibliography prepared in January, 1928, by W. H. Brettinger, L. D. Hartson, and H. A. Toops for the counselors of students in Ohio colleges. This bibliography is entitled *A Select Bibliography on Vocational Counsel and the College Student.* Also a more recent bibliography has been used which was prepared at the University of Michigan and is entitled *Vocational Information: A Bibliography for College and High School Students.*

To add interest to the course, biographical material has been included, such as: Addams, *Twenty Years at Hull House;* Beebe, *Arcturus Adventure;* Burbank, *Harvest of the Years;* Harrow, *Eminent Chemists of Our Times;* Palmer, *Life of Alice Freeman Palmer;* and Bolton, *Lives of Girls Who Became Famous.*

The Freshman junior-college class in which the orientation course in vocations has been taught has been conducted as a discussion group. The students were given mimeographed material collected by the instructor concerning each vocation. They were also required to read and outline from fifty to seventy-five pages of collateral material related to each vocation. The class discus-

sions were based on the reading material assigned plus any related personal experiences of either the instructor or the students.

Each student did an individual piece of work each semester. The first semester they were required to read a book, approved by the instructor, which developed in detail some phase of one of the vocations, and to write a fifteen-hundred word report of the book. The second semester they were required to write a two-thousand word term paper in which they discussed one of two subjects: "How the Course in Vocations Is Related to the Other Three Orientation Courses Given at Stephens College" or "How the Vocations Course Has Helped Me to Select the General Field of Work Which I Want To Enter."

The class discussions were held three days a week, although the class met five days a week for two semesters. The other two days were reserved for quizzes and individual conferences.

The first three weeks of the course were devoted to orienting the students to the field. During this time, the discussions related to such subjects as "Why a Course of This Kind Is Needed in the Present-Day World"; "The Family as a Unit Which Was Industrially and Economically Self-Sufficient"; "The Handicraft System"; "The Industrial Revolution"; and "Women Employed in Gainful Occupations Today." For collateral reading, the students read such books as Cheney, *Industrial and Social History of England;* Sparks, *National Development;* and Robinson and Beard, *Development of Modern Europe.*

The actual vocations which were discussed during the two semesters were: (1) home economics; (2) education; (3) social work; (4) nursing; (5) dentistry; (6) pharmacy; (7) public health; (8) medicine; (9) physical education; (10) sciences; (11) library work; (12) general office and secretarial work; (13) accounting; (14) banking; (15) insurance; (16) advertising; (17) department-store work; (18) personnel-work; (19) law; (20) religious work; (21) industrial arts; (22) music; (23) dancing; (24) dramatic work; (25) writing; (26) politics and civil service; (27) home-making.

These vocations were discussed in the order given, and the following seven points were developed under each:

1. Contributions to civilization (e.g., in the health professions that emphasis has gradually changed from cure of diseases to prevention).

2. Relation to other vocations (e.g., the home-economics experts are not limited to the professional world, but are also used in the industrial and commercial worlds).

3. Historical development of particular vocations.

4. Avenues within the particular vocation (e.g., personnel workers of various types are needed in industries, stores, and schools).

5. Education and training needed and the best place to get it for each vocation.

6. Personal qualifications needed and why.

7. Remuneration—in terms of personal satisfaction as well as financial rewards.

Wherever possible, a specialist in each field was brought in to discuss her work with the class, e.g., the head of the physical education department or the family welfare worker of the town. Miss Helen Bennett, of Chicago, came to discuss business opportunities for women. At another time Miss Florence Jackson, vocational counselor of Wellesley, spent a week on our campus discussing with our students the opportunities for them in various professions. It was also found that the students gained a better idea of some vocations by actually seeing people at work, e.g., a trip to one of the best-organized banks in the town.

When the course was given as a one-semester course to the more advanced students this last year, the class was divided into committees. Each committee of three or four was held responsible for the intensive study of some one vocation. Each member of the committee reported on some specific phase of the vocation, and after all the reports were given, there was a general class discussion of each vocation. The entire class was held responsible for reports on all vocations. It was in this class, too, that the attempt was made to group the vocations into groups for the purpose of class discussions (e.g., the health professions, the sciences, the business fields, and the arts).

It is difficult to pass judgment on the success of such a course.

An effort will be made, however, to indicate its value in terms of the results of tests given, in terms of the interest shown and the opinions expressed by the students, and in terms of the instructor's personal experiences.

Limited use was made of the Vocational Interest Tests prepared by Dr. E. K. Strong, of Leland Stanford University, in an effort to discover the vocational interests of the students. As Dr. Strong himself points out, the tests need much modification before they can be used for women. Hence, their use really had little value for our students.

The instructor also devised some information tests which were given before the students discussed specific vocations and again after the discussion of the particular vocations included. The first group of tests showed that practically all of the students had entered the course with very hazy ideas regarding our economic organization, and had little conception of the relationship of specific vocations to everyday life. When the tests were given again after particular vocations had been discussed in class, the students showed a much clearer grasp of the relationship of specific vocations to modern life.

The students of the class may be divided into three general groups on the basis of their interests, namely, those who were keenly interested, those of average interest, and those slightly bored. The enthusiastic students were, with but one exception, the students who had the highest I.Q.s in the class, who had a distinct curiosity to know all that there is to be known about our modern world, and who were eager either to discover the field in which they wished to continue their college work or to verify their previous ideas concerning the field in which they were most interested. The students with average interest were usually indifferent students, or sometimes students who believed that they were repeating material of earlier courses in elementary economics or history. As a rule, the latter group of students admitted by the end of the year that they had gained new information and were much better able as a result to correlate all the material which they had had in previous courses. If these students of average interest did not develop this conviction by the end of the year, they

were frankly bored. But in every case, with the one exception mentioned in the foregoing, the bored students were students who were poor in their work in other classes. The exception was a student with a high I.Q. who was interested only in art work and whose courses related entirely to art. She finished the course without being convinced that she was a more intelligent person for having studied the course in vocations, even though her work in the class had consistently ranked in the upper quartile.

A very interesting fact concerning the opinions of the students is that the most favorable comments have come from those who have been out of the course for a year. Almost invariably they have come back to the instructor with the statement that they valued the course increasingly as they pursued other studies, and were better able to understand important relationships because of information gained in the vocations course.

After the foregoing comments, it is almost unnecessary to add that the instructor believes that a course in vocations for women is worth while. Two of its chief weaknesses were mentioned earlier in the report, namely, the lack of accurate data concerning specific vocations, and the difficulty of keeping the discussion of so many vocations from following such a definite routine that it becomes monotonous. As suggested before, the first difficulty will be cared for in a few years by the research work which is being done in various parts of the country, especially by the vocational boards of some of our large city schools. The instructor believes that the second difficulty can be overcome by the organization of committees to study specific vocations and by the management of the class on a modified seminar plan. In carrying out this plan, she believes it is best to group the vocations, and in general class discussions to make a cross-section of common characteristics.

Another difficulty has arisen because of differences in the previous training of the students who enter the course. Some repeat material which they have studied before, while others lack much information which one takes for granted, e.g., elementary principles of government and facts of history. All of them need some principles of elementary economics before they can grasp the full significance of the vocations which they study.

One of the most startling facts which the instructor discovered this last semester was that she has gained the reputation of being a feminist, and is stimulating all girls to believe that they must have a career whether they marry or not. Without question, such is *not* the purpose of the course in vocations as taught in Stephens College. As stated in the beginning of this report, the course is designed to give the students an overview of the many vocations, including home-making, in which they can make practical application of the three kinds of knowledge which they gain in college, and to develop in them a sense of responsibility to make that application if they are to be intelligent citizens in the communities in which they live.

CHAPTER XIII

READJUSTMENTS IN THE JUNIOR-COLLEGE CURRICULUM AT THE UNIVERSITY OF CHICAGO

C. S. BOUCHER

Students, faculty members, and administrative officers of our better colleges are at present more constructively critical of the shortcomings and failures of the existing program and methods of undergraduate education than at any previous time in our history. The time and efforts of many persons are being devoted to a critical study of curriculums, methods of instruction, and administrative and personnel problems of considerable variety through such agencies as national and local group conferences, commissions, committees, questionnaires, and specially appointed visiting agents. A day seems incomplete if it has not brought a questionnaire from another institution, and visitors on missions of inquiry and investigation are with us frequently. Change in performance merely for the sake of doing something different is foolish and dangerous—"quack-doctoring," indeed; but change based upon a careful study of the shortcomings of past performance in the light of tested thought and more clearly defined objectives is inspiring because charged with possibilities for progress.

Shortly after the World War, when nearly every college in the country found itself confronted with a veritable flood of students, one institution after another came to a realization that it had not made adequate provision for the educational guidance of its students, who came in numbers unknown before, with widely varying educational interests and objectives, or with the hope of finding both an interest and an objective in college. During the early history of our colleges, indeed, down to a time within the memory of living men, there was no problem of educational guidance for students, because the curriculum was fixed. There was no choice be-

tween meat offerings or dessert offerings; each student was fed the same intellectual menu as every other student who entered at the same time. There came a time when research work broadened the limits of old fields of knowledge and opened up entirely new fields. New courses could be introduced only if electives were introduced. In order that the curriculum should reflect the widened boundaries of knowledge, electives were introduced, at first sparingly, and then wholesale. As is typical of us in so many phases of life, we went from one extreme to another—from the rigidly fixed curriculum to the almost completely elective curriculum. Twenty years ago, in many colleges, entering students faced a formidably large catalogue with literally hundreds of course offerings, not clearly described and not properly related, with the elective system in vogue and with no faculty member and no administrative officer available to help them solve the Chinese puzzle of course elections.

Throughout his four years a student with no definite professional aim, finding no one on the college staff to guide him, more often than not would drift from one subject to another, depending upon chance, caprice, or student gossip for his guidance, and would come out at the end of four years with an academic record sheet worthy of a place in an educational museum. And yet a student with a constitution strong enough to withstand such a stuffing of utterly indigestible and unassimilable educational material would come out triumphantly with a diploma and a degree (though frequently without anything worthy of being called an education), provided only that he had accumulated a certain number of course credits. It is no wonder that in this period our college students developed for themselves as never before outlets for their best thought and efforts, "student activities"—athletics, publications, dramatics, and a vast number of purely social activities—something interesting and more worth while than the meaningless and deadly academic mummery.

After seeing from experience the folly of both extremes—the rigidly fixed curriculum and the wide open elective system—the better colleges have endeavored to strike a happy medium by specifying degree requirements in general but meaningful terms, and by providing an educational guidance service. Regarding the for-

mer, the best practice now provides for a number of group requirements—English, foreign language, mathematics, natural and physical science, and social science—designed to furnish a proper balance in an introduction to general education to be completed by the end of the second year, and a sequence or concentration requirement for the last two years, so that a student may be sure to get deep enough into at least one branch of knowledge to master its technique and method of thought—so that he may think and express himself like an educated person in at least one field of thought. The educational guidance service—by a number of faculty members, whether called deans, advisers, or counselors—provides, when functioning properly, a sufficient number of faculty members, carefully selected because of appropriate qualifications, to give a reasonable amount of time to each student individually, to plan *with* him, as well as *for* him, an educational program which seems to offer for him most possibilities for pleasure and profit in its pursuit. These educational guidance agents, with students assigned to them on the basis of scholastic interests, play the rôles of guides, counselors, and friends, and are doing our most effective personnel work, of great variety, incidental to, and as a natural part of, their educational guidance work.

Recently we have heard much blare of trumpets about a fifth wheel to the college cart—an independent personnel department, whose staff members are not faculty members and are responsible only to the president's office. A college which has set up such an agency has done so apparently on the assumption that because faculty members have so long neglected their duty regarding educational guidance and all related personnel problems, they canont or will not study and meet this personnel service obligation of the institution to its students, even if the proper leadership were furnished. If this is so, then indeed there is no hope in us. However, I know from personal observation that, in a number of institutions, where the matter has been put before the faculty in an intelligent manner, it has not been difficult to recruit a sufficient number of faculty members in a very short time to afford adequate student service by men and women who derive great personal satisfaction from the service and soon acquire new points of view which make

them all the more valuable as members of the staff of instruction. The faculty members who are not personally in this service soon come to look to those members who are for opinions and recommendations of great value in faculty meetings when matters of academic legislation are considered. The best of the Freshman Week programs, which are now conducted in a number of colleges, are devoted mainly to two objectives: educational guidance and orientation into college life generally. Our experience at the University of Chicago has led us to center very largely on the former and to continue it throughout the student's college career, developing the orientation project primarily during the first term through individual conferences and general assemblies for Freshmen.

As soon as serious study was given to the educational guidance of students, it was discovered in most institutions that the curriculum needed serious study and revision, because, during the period when the wide-open elective system prevailed, departmental course offerings, like Topsy, simply "growed up." When old fields of knowledge were broadened and new fields were explored through praiseworthy research activities, which began to bloom and produce fruit in the closing decades of the last century, new courses appeared in college catalogues, slowly at first as the fixed curriculum gradually gave way, and then very rapidly as the elective system became general. For a decade or more there was a perfect flood of new courses of wondrous variety and description. A critical examination of the courses announced in any one of two dozen departments in a single college in the early nineteen hundreds shows that perhaps half of the courses could not be justified on any ground, save one—they offered the instructors opportunities to pursue pet hobbies in a very limited part of a field—and that the course offerings of a department were not properly related and balanced.

The much-needed and too-long-delayed critical examination of departmental offerings has been stimulated in a steadily increasing number of colleges, particularly in the last ten years, by need for educational guidance, by the remarkably progressive advancement in secondary education, and by the development of the junior-college movement.

In what may be termed the "chaotic" period, when the elective system ran riotously into utter confusion—a period which lasted in most institutions until ten or less than ten years ago, and still persists in some institutions—most departmental introductory courses were designed with the sole purpose of preparing students for advanced courses in the respective departments. It seemed that nearly every department framed its curriculum as though the intellectual sun rose and set within its boundaries, as though every worthy student must desire to specialize in that department, and as though that department had a life-long vested interest in every student who elected its introductory course. Most departments seemed to think only in terms of specialization and to be interested not at all in students who wanted and needed an introduction to several fields of thought as essential parts of a general education.

In the last decade a basic theory of college education has been put before us more and more frequently and with increasing forcefulness. This theory may be stated briefly as follows: Though a student who enters college with a well-defined educational and perhaps vocational aim should be given the opportunity and should be encouraged to pursue that aim from the beginning of his Freshman year, the major emphasis in the junior-college years should be placed upon breadth of general education; and, though general education should continue in senior college, the major emphasis of the last two years should be upon concentration in, and depth of penetration of, some particular field of thought. Thus the attention of each department has been called to its obligation to offer appropriate introductory work to no less than three types of students: first, students who expect to specialize in that department, or to center their senior-college concentration in and around that department; second, students who know that they will not specialize in that department and yet desire its introductory work for the sake of rounding out a general education, or as an aid to work in a related field of thought; third, students who have not determined upon a field of concentration, but are looking for what may become for them a major educational interest.

Though one department may find it possible, after careful study and planning, to design and offer a single course which will

serve adequately and satisfactorily the needs of all three types of students, another department may find it advisable or even necessary to offer two introductory courses—one for the first type, and another for the second and third types of students. In the last few years one department after another, in our better colleges, has studied its course offerings as not before, in a generation, and has had the courage to discontinue many of its old courses and to introduce new ones, fewer in number and arranged in a well-ordered, progressive sequence, with elementary courses designed not only to furnish the foundation material necessarily prerequisite to the departmental advanced courses, but also to serve the needs of students who are interested in a particular department only in so far as it contributes to a general education.

One of the first and most significant results of recent studies of educational objectives and the curriculum has been a new type of course, called an "orientation" or "survey" course. Though the first of these courses was in the field of the social sciences, similar courses have been developed in the natural sciences, the humanities, and the fine arts. In the main they are Freshman courses designed to orient the student in a large field of thought which, it is now recognized, frequently runs through and across many of the artificial boundary lines which have been established by the growth of the numerous departmental divisions which universities have developed and formalized. One example, no longer in the experimental stage but a proved success, is a course which covers the whole field of the physical and natural sciences. For a student who may want no more than an introduction to the field of science, this course seems to be more profitable than any one of the old-style departmental introductory courses; and for the student who expects to specialize in one of the sciences, this course gives him an excellent background for later concentration. It shows him the true position of his specialty in a larger field of thought, as well as the contributing values of each specialized department for the others in the broader field of science.

The appearance of these general survey courses has caused more than one department to restudy the content of its introductory course with a view to making it satisfactory not only for the

student preparing for advanced work in that department but also for students who desire some knowledge of one departmental field as part of their preparation for work in a related field, and for students who desire some knowledge of this or that departmental field as part of a general education. At the present time it is clearly evident that our course offerings are rapidly becoming better organized individually and collectively than ever before.

The remaining sessions of this program are devoted to six reports on readjustments in junior-college courses in modern foreign languages, economics, geology, history, art, and sociology, as now conducted in the University of Chicago.

It is to be regretted that one of our most recently developed and at the same time one of the most interesting of our new courses cannot be presented in this series, because Professor Mayme I. Logsdon, who has been in charge of the course, is not at present in residence. This is a survey course in elementary mathematics, open to Freshmen who have offered plane geometry and elementary algebra for entrance. This is a descriptive course giving the fundamental notions of elementary college mathematics, with applications to various fields, the meaning and uses of trigonometry, analytic geometry and calculus, and the notions of functions and graphs. The course is designed (*a*) for those who plan to specialize in other departments but who desire some knowledge of the methods and uses of collegiate mathematics; (*b*) for those who are in doubt as to whether they will choose mathematics as the principal department of the senior-college sequence; (*c*) as the first major of a three-quarter course which will prepare students for courses in statistics offered by other departments. For students of the first type this course constitutes their final work in mathematics; for those of the second type it may aid in determining their choice and may be followed directly by the two following units of the three-quarter course.

When the need for such a course was strongly urged by several other departments, the Department of Mathematics at once showed a desire to co-operate. Time and study in no small amounts were devoted to the project by Professor Logsdon and other members of

the department. The reports of students about the course have been enthusiastically favorable, and six faculty members from other departments attended the course regularly throughout last Autumn Quarter, because they believed that it offered something which they needed—and they were not disappointed.

In each of the Departments of Geology and of Sociology, two introductory courses are offered—one intended primarily for students who are not intending to pursue further work in the Department, and another for students who do plan to take further work in the Department. The Geology Department for some years has had an introductory course well designed for students who expect to do more work in geology. Recently, however, the staff of the Department has offered a new one-quarter survey course intended primarily for students who neither desire nor need more than an introductory survey of the field of geology, and for those who have not as yet discovered a principal interest for senior-college concentration. Though the Department of Sociology has for many years offered a one-quarter course for Sophomores as a prerequisite for more advanced courses, during the last two years it has been conducting an experimental course with Freshmen in their third quarter. The course is offered co-operatively by the members of the Department and is designed to give an orientation in the field of sociology. The course is still in the experimental stage and is worthy of careful study and close observation before definitive judgments can be passed.

In modern foreign languages, economics, history, and art, a year's course is presented which is designed to meet not only the general educational and tool needs of students who may not go farther in the department but also to furnish the introductory prerequisite for students who do pursue further work in the department.

In many colleges the study of at least one foreign language to the extent of attaining ability to read it is a specific junior-college requirement. The objectives of this requirement are usually stated in terms of cultural values, general education requirements, a tool aid in opening up subject matter in many fields of thought, and a

necessary prerequisite for the study of the cultural literature of the people whose language is studied. Soon after Professor Henry C. Morrison came to our School of Education in 1919, he was asked to direct a complete revision of our junior-college work in modern foreign languages. Professor Morrison was personally in charge of this work until two years ago, when Professor Otto F. Bond, who had been connected with the experiment from its beginning, took over the supervisory work. Though we have not ceased to regard some phases of this work as still in an experimental stage, results have been obtained which are worthy of serious consideration. During the last two years visitors from other institutions have been with us frequently in order to observe and study this part of our work. In a great majority of instances these visitors have evaluated what they have observed in terms of high praise and have indicated a desire to introduce our methods into their own institutions.

A few years ago Professor L. C. Marshall, then chairman of the Department of Economics, maintained that our junior-college offerings in economics were not properly articulated. After taking a one-quarter introductory course the student could then take any one or more of a considerable number of courses in as many functional parts of the field of economics. The members of the Department, in a noteworthy endeavor to improve their junior-college offerings, discontinued nearly the entire group of courses, and introduced a new three-quarter sequence open to Freshmen. Though careful study is still being given to our junior-college courses in economics, and though we are not yet thoroughly satisfied with our offerings, the Department has made a notable and praiseworthy effort to design a year's survey course which will serve the ends of general education, of tool aids in other social-science work, and of prerequisite preparation for advanced work in economics.

Though it requires some swallowing of pride to confess it, a sense of honesty requires the confession, that our three-quarter course in history for Freshmen, until all too recently, was anything but satisfactory. It was the the old stereotyped course in Western European history, with too much emphasis on political and mili-

tary history, which was actually inferior to the work presented to a considerable number of our Freshmen in high school. Three years ago the history department gave serious thought to the organization of a new course for Freshmen—a three-quarter course in the history of civilization. Though this course has not as yet been developed to the point that we are satisfied with it, it illustrates the fact that a department admits its shortcomings in past performance and endeavors to meet its obligation to give to Freshmen the best and most stimulating intellectual experience which it is possible to offer in the department's field of thought.

In art, though we are not interested in the development of a trade or practice school, we are deeply interested in offering to all of our students stimulating work in the history and appreciation of art, and to a smaller number of students advanced work in the theory and practice of art. In full recognition of the importance and value of the history and appreciation of art in the life of every cultured and educated citizen, the Art Department has developed a year's course for Sophomores. The first quarter is devoted primarily to an introduction to art appreciation, and may, or may not, be followed by a two-quarter course which is devoted to a survey of the history of art. Here, again, we have an instance of a Department that endeavors not only to offer prerequisite introductory work for advanced study by specialists but also courses that contribute a necessary part of a general education.

In view of the considerable amount of attention which has been devoted recently, in various association meetings and their publications, to needed improvements in instruction, it may be appropriate to remark that no matter how well a course may be designed with respect to its content, it may be a complete failure owing to poor teaching. What has been done, in most of the courses mentioned in the foregoing, to insure instruction by persons who are interested in, and have real capacity for, successful teaching, is a most important subject, but one which I cannot discuss on this occasion.

Criticisms and suggestions regarding any of the six different departmental junior-college offerings described in this series will

be welcome. In some instances we believe that a high degree of success has been demonstrated; in some instances we hope to achieve a greater degree of success; in other instances we are not as yet claiming success or admitting failure—we are experimenting and are studying results. There are several departments not mentioned in the preceding which are at work upon revisions of their introductory courses. We hope that any department which is not willing to study, both critically and continuously, its own performance at all levels of work, and particularly at the junior-college level, will feel that it is not a worthy member of the University of Chicago family.

CHAPTER XIV

JUNIOR-COLLEGE WORK IN MODERN FOREIGN LANGUAGES

OTTO F. BOND

Junior-College instruction in modern languages at the University of Chicago is the result neither of haphazard evolution nor of accident nor of some pedagogical theory imported from abroad as a language cure-all. It is rather the outcome of a serious attempt[1] to study the general problem of language-learning in the laboratory of the classroom, and to utilize the findings in improving modern language-teaching in this particular institution and at this particular level of learning.

This attempt has resulted in an organization and technique producing a relatively high degree of achievement in language ability in the first-year sequence and a pronounced economy, educational and physical. Although the procedure has been considerably influenced by local needs, the writer sees no serious obstacle to its use elsewhere at the same learning level, provided a preliminary survey of the conditions, limitations, and needs of the new constit-

[1] In 1920, the Department of Romance Languages turned over its first year of work in French and Spanish to the School of Education to administer experimentally as a course in secondary education. Until 1927, the first-year courses in these languages, plus first-year German added in 1924, were part of the division of the University known as the Laboratory Schools of the School of Education, under the supervision of Professor Henry C. Morrison. In 1927, the junior-college language group reverted to the College of Arts of the University, to form, with the addition of all second-year work in the three foreign languages, a Department of Modern Languages in the Junior Colleges, under separate budget and administration. The spirit of experimental essay and observation, inaugurated in the Laboratory Schools under Professor Morrison, remains in the present group as a most valued asset. Earlier portions of this experimental study have been reported in the Supplementary Educational Monograph No. 26, *Studies in Secondary Education* (1925), II, 177–200. It has been outlined also in the publications of the American and Canadian Committees on Modern Languages, Vol. VI, *Modern Language Instruction in Canada* (Toronto, 1928), I, 490–99. Special studies have appeared in recent volumes of the *Modern Language Journal.*

uency be made and necessary adjustments adopted. However, the adoption of the externals of this procedure would not of itself guarantee the success of the method: the personal element involved in student conferences, case-studies, and individual student direction plays a very important part in obtaining results. Without this personal service, the procedure would be ineffective and disappointing.

For lack of space, I shall discuss only the more significant differences between the procedures adopted and standard practices, and shall confine the evidence presented to that relating to the teaching of French in the first-year sequence. Although Spanish and German offer sufficient individual differences from French to warrant special treatment, yet they share in common most of the problems of language-learning, and practices favorable to the one are of value to the other. Of the second-year sequence, also, little can be said here; its problems are no longer "learning" problems.

Our first-year French course has a triple function: it acts as a validating course for one- and two-unit entrants in French to the colleges; it constitutes a "terminal" course, satisfying the modern language degree requirements of the University of Chicago; and it provides a satisfactory foundation for continuation study in French for an interested minority. To the complexity of these functions, one must add the need of providing for the formidable diversity of age, background, attitude, interest in language study, previous language experience, and racial and physiological traits that are to be found in the student personnel of a great urban university.

As a validating course, it must progress in orderly and commensurable leaps and yet be sufficiently flexible to give proper and expeditious placement to incoming students from other schools, bringing with them a diversity of experiences with texts, methods, and teachers. This placement must operate with a minimum of administrative friction; it must also appeal to the sense of fairness of the student, offering rewards for courses omitted because of superior ability, as well as penalties for demotion and repetition.[2] Furthermore, placement must be conditioned upon case evidence plus

[2] In the announcements of the courses of the sequence, the statement of the unit equivalence is completed by the following: "All such registrations are subject to readjustment in accordance with the demonstrated ability of the student."

performance, the former involving record-taking and conference, the latter involving a definite program of instruction, with sufficient overlapping in the earlier portions of the courses, and the periodic use of unit and standard achievement tests. Otherwise, placement is arbitrary if not harmful.

As a terminal course, the sequence focuses upon an objective within reach of all students under normal conditions and realizable in the one hundred fifty fifty-minute recitation periods of its allotment, supplemented by approximately two hundred fifty hours of preparatory study. In general, the major aim is the attainment of reading ability of French, with its tool value and promise of permanence. Obviously, the attainment of this aim in one year is possible only with the student's active co-operation and interest. It is at this point that a certain amount of re-education enters into the scheme, breaking down the conception of time as a measure of skill, discouraging lesson-getting, explaining the working details of a language-arts technique, removing language inhibitions, promoting student voluntary reading, and guiding the student in personal, interest-provoking projects. Minus this factor of re-education, I question the success of this or other systems of language teaching at the college level.

It may seem doubtful whether any language objective or set of objectives can be attained with permanency in so short an exposure, unless by the minority upper quartile of a class. It will be the duty of the latter part of this article to present data which indicate that last year all but 8 per cent attained an achievement in reading and other language abilities equal to the standard for two college years or better as defined by the American Council. The data do not include, however, the "imponderables" of attitude toward the reading of French, the will to read French, the nature of the material read, and the student's application of his French reading to his own living—all vital proof of the possession of a skill.

The probable permanency of this training is partly a matter of conjecture, as those who have read Professor O'Shea's report[3] on after-school use of foreign languages must realize. But the fact

[3] M. V. O'Shea, *The Reading of Modern Foreign Languages*, United States Bureau of Education Bulletin No. 16 (1927).

that the first-year students *do* read "understandingly, appreciatively and readily," and do so *willingly* and in fairly incredible amounts, is a strong argument in favor of probable permanence.

As a continuation course, the sequence has made possible the reduction to five majors of a six-major language requirement for entrance to the senior-college French courses; it has changed the nature of the second-year sequence from composition-translation routine to exploratory courses in literature and literary criticism; and it has so facilitated promotional activity in both sequences that the upper quartile of the entering students reaches the senior-college courses after four and sometimes three quarters. To the serious student with limited funds the latter feature makes a strong appeal.

At the basis of this sequence is a language-arts technique, which is briefly defined by Morrison as "learning to read thought content by abundant experience in reading thought content from the beginning," and further analyzed in his *Practice of Teaching in the Secondary School.*[4] These principles have been subjected to laboratory tests by Buswell[5] for the modern foreign language study, and have been applied with extraordinary success to the teaching of English to Bengalese children by Michael West[6] and his disciples in Bombay. Approval in general of the so-called "reading method" for both schools and colleges finds expression in O'Shea's report on continuation[7] records, in the monumental report of the Canadian Modern Language Committee,[8] and in the recent report of the American Committee,[9] and elsewhere. It is under investigation at various educational centers, notably the University of Iowa and the University of Illinois.

[4] H. C. Morrison, *The Practice of Teaching in the Secondary School* (University of Chicago Press, 1926).

[5] G. T. Buswell, *A Laboratory Study of the Reading of Modern Foreign Languages* (Macmillan Co., 1927).

[6] Michael West, *Learning To Read a Foreign Language* and *New Method Readers* (Longmans, Green & Co., 1926).

[7] Cf. *supra.*

[8] Cf. *supra.*

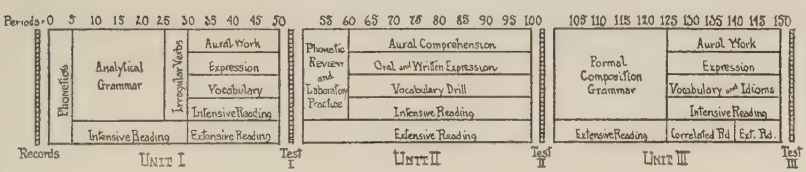
[9] *Publications of the American and Canadian Committees on Modern Languages,* Vol. XII. Macmillan Co., 1929.

The present structure of our first-year course is indicated in Diagram I. The one hundred fifty fifty-minute periods of the year are broken into three quarter-sections, or units, labeled for the present I, II and III, of fifty periods each.[10] Final achievement tests are administered at the close of each unit, and credit for the sequence is withheld until the completion of Unit III with the grade of C or better. Furthermore, the sequence yields only half-credit if taken after the student has amassed eighteen majors, and no credit after the completion of twenty-seven majors.

The first five periods of Unit I are devoted solely to a phonetic treatment of the sounds of French, working from spelling to sound,

DIAGRAM I

STRUCTURE OF A FIRST-YEAR FRENCH COURSE



supplemented in refractory cases by a small amount of corrective laboratory instruction.

During Periods 6 to 25, inclusive, the student concentrates on an *analytical* study of the variable forms of French grammar, free from set vocabularies, usage rules, and synthetic drills except in the case of pronunciation. It is a period of passive recognition of the written and spoken word. The preceding phonetic instruction is reviewed twice from different angles, and a small amount of classroom reading is done in a graded text to furnish supplementary material for analysis. Such reading begins usually at the fifteenth period. Inasmuch as this is a period of information-giving, crowded with new facts, the language of instruction is English.

[10] In the University of Chicago announcements, these courses are numbered 101, 102, 103, respectively. The residence courses are duplicated in the University College and Home-Study Department programs. A specially adapted course: 101G has been arranged for graduate students preparing for the reading ability test in French required of candidates for advanced degrees; this is a non-credit, informal course, not to be confused with the regular 101 course.

A rapid analysis of fifty-four irregular type verbs within Periods 26–30, inclusive, concludes the formalized grammatical instruction in the whole sequence until the opening periods of Unit III. From Period 30 on, quantitative reading and aural experience replace formal grammar. This "exposure" to aural and written French, with its "hit and miss" technique, as Morrison terms it, produces results, as the final achievement tests bear witness.

It may seem absurd to claim that thirty periods of grammar and verb analysis can lead to anything but a superficial control of the language, and doubtless it would, were it not for the amount and the manner of the reading that follows, and the single-phase approach to the subject characteristic of all three units. Doubtless there are better ways of attaining reading mastery than through the recognition-grammar approach, but the factors of time, age, and finances affecting our junior-college groups recommend the latter as the shortest and best route to the job in hand. It is no time for dallying.

With the thirtieth period, the student begins his reading experience through class assignments and, if he be interested or ambitious, embarks on his voluntary reading program. From then on, growth in reading power depends upon him; the class, as such, dissolves.

Periods 31 to 50 are given to aural and oral practice, vocabulary building, and the beginnings of direct, oral, and written expression based upon the classroom text. The initial passive phase is left for active response. There is little need for French to English translation and *no* need for English to French translation. With trial-and-error technique and common sense on the part of the teacher, student progress in comprehension requires no crutches in expression. The unit closes with standard tests.[11]

No claims of finality are made for Unit I; it is still in the realm of trial and error. At least, it seems to set up no inhibitions. Its main problem is the instructor himself. He must discard ingrained

[11] The *American Council Alpha French Tests* (vocabulary, grammar, silent reading, and composition), prepared for the Modern Foreign Language Study by Professors Henmon, Coleman, and Trabue (World Book Company, 1927). Other standard tests have also been used.

"mastery" notions and lesson-learning attitudes, scorn the fetish of grades and averages, and pull himself out of the science-type rut into which his grammatical background has driven him. He must *learn* as well as teach his students, which does not come easily to the research-type instructor. To know when to let an error go uncorrected and how profitably to manage a student conference is no less than an art. It is his to acquire.

Unit II reviews phonetics for ten periods, as a remedial device for persisting errors in pronunciation and audition. In obstinate cases, resort is had to the logophone and the laboratory. The extensive reading begun in Unit I is now the order of the day. Previously of a voluntary nature, it now becomes a loose requirement of approximately eight hundred pages, subject to weekly, analytical reports on prepared forms, ungraded and non-returnable. One period a week is definitely set aside for the necessary conferences and discussions. The success of the whole sequence depends on this reading feature. Unit II is the critical course in the year. It must be carefully, sympathetically handled by both instructor and student.

Periods 61–100 are spent in the intensive study of a text as material for direct expression and aural drill, except for the weekly reading conference period already mentioned. In this expression phase, the student is not made keenly aware of his "misses"; as in his reading, his achievement must be gauged relatively, and his speech and composition efforts be so treated as to "develop a sense of ease in the use of the language, even to the neglect of accuracy in phonic and grammatical minutiae."[12] French is the usual language for the classroom. Tests close the unit.

The extensive reading in Unit III has a minimum limit of one thousand pages. In keeping with Professor O'Shea's suggestion that every language student should be acquainted with reading material of tool value to him before the close of his formal study of the foreign language, at least one-fourth of the reading requirement of Unit III is required in correlation with some other college course or with the student's major interest. Coming nearly at the end of a year's reading, this correlated reading acts as a proof to the student

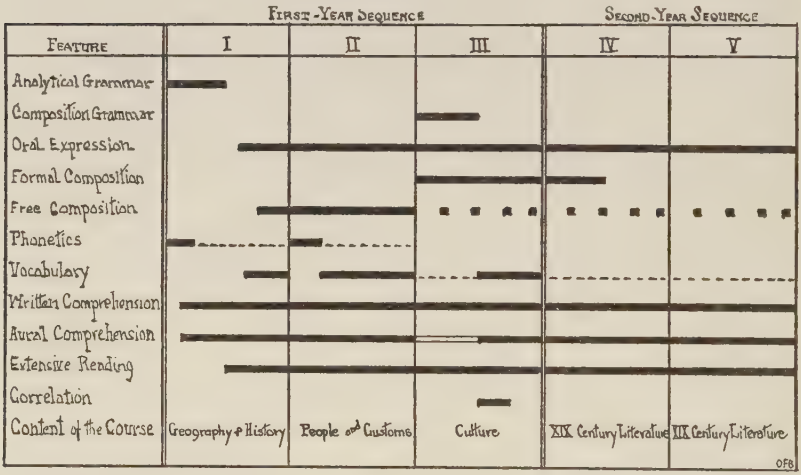
[12] M. V. O'Shea, *op. cit.*, p. 78.

that he possesses the *ability to read French for his own purpose and pleasure.* One need not comment on the educational value of such an object lesson!

In this last unit, the classwork centers for twenty-five or more periods upon a brief, review, composition-type grammar, with its rules for usage, idioms, and formal composition exercises. This is the first and only appearance of formalized, standard grammar in the sequence. The reading adaptation already reached by the majority of the class may now be converted by way of grammar into a

DIAGRAM II

Distribution of Instructional Details in a First- and Second-Year French Sequence



skill, the student criticizing his own discourse. Grammar thus functions in its proper place; the cart is *behind* the horse. In other features, the unit resembles its predecessor.

Without going into detail, Diagram II illustrates the relationship between the three units of the first-year sequence and the two units (IV, V) of the second-year sequence. Note the isolation of composition grammar in Unit III, the limitation of phonetics to Units I and II, the correlation feature in Unit III, the limitation of formal composition to Units III and IV, the almost unbroken progression in free composition and oral expression through the five

units, the solid line of written comprehension and extensive reading through the two sequences. Obviously, this is not just a reading course, though reading is the basis. And, withal, the content of the first-year sequence has not been neglected; its intensive reading traverses French geography, history, people, and culture, creating a cultural background for later studies.

From the last period of investigation I should like to summon a few sets of data[13] in graphic form in confirmation of some of the foregoing claims or in answer to certain queries that may arise.

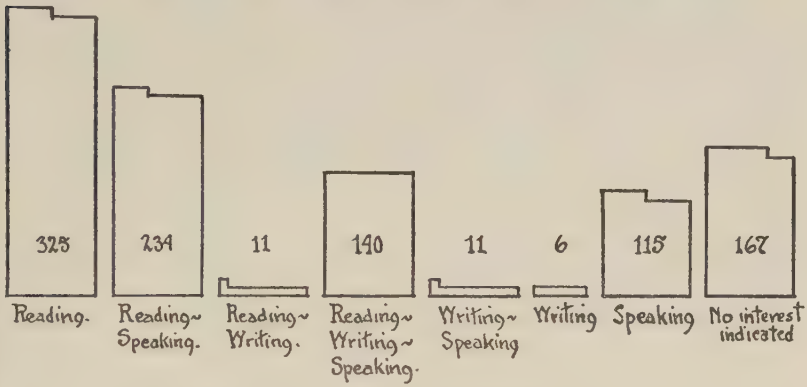


FIG. 1.—Main interest in the study of French based on 1,009 cases

The assumption that students are mainly interested in reading a foreign language is sometimes contested, particularly by "direct method" enthusiasts. Our records provide affirmative evidence. The students registered in our junior-college Courses I, II, and III during the five-year period 1923–28 testify to a preponderant interest in reading, as shown in Figure 1. Of the 1,009 cases, 32 per cent (325 cases) state that reading is their sole interest, as compared with 11 per cent (115 cases) for speaking only and 16 per cent for writing only. Nearly three times as many students think

[13] Certain of the following statistics are based upon student *personal and study record* forms covering all registrants since 1921; some are taken from instructor's quarterly reports made to the superintendent of the Laboratory Schools; others are based on quarterly test summaries and reading-report summaries deposited in the departmental files; and still others are the result of personal investigations or projects. Unfortunately, the "imponderables" do not enter into this array, and they are the most convincing and most interesting!

of studying French in terms of reading as in terms of speaking the language! Or, combining all replies that indicate a given interest alone or in combination, we have 70 per cent (710 cases) that include reading, as compared with 50 per cent (500 cases) that include speaking and 17 per cent (168 cases) that include writing. One hundred sixty-seven students make no statement. How does this attitude conform to the four-objective language set-up in universal favor? Is not this attitude a valid factor in determining language procedure?

"How much do your students read?" is a common query. Since the department files hold intensive and extensive reading records by year and by quarter and in the latter case for individuals, the answer is a matter of time and mathematics.

Figure 2 shows the reading range of two sections in French for the full sequence (I, II, III), 1927–28. These were not "forced" sections; they have been selected for discussion here because they were the only ones under the personal control of the writer during that year. The achievement is typical of the general performance. The median of 161 (range 273/122) is based on the voluntary reading of 35 beginners during the last half of Unit I; in Unit II, with reading in the focus, the median climbs to 1,006 pages (range 1,050/770), indicating both will and deed on the part of the 34 participants; in Unit III, the median rises still higher to 1,084 pages (ranges 1,170/1,010) for the 31 survivors. The average annual reading experience per student in these two sections amounts to 2,215 (norm) pages. Adding the intensive classroom reading, the grand total reaches approximately 3,000 pages. If 300 words represents standard page, we have a reading exposure of 900,000 running words. What potentiality in nearly a million words of running discourse in French, read in less than nine months!

This achievement is the result of growth in methods. Figure 3 shows that the annual average reading scores from 1924 to 1928, inclusive, increase from 1,184 pages in 1924 to 2,215 pages in 1928, with an annual gain of 23 per cent over the average of the preceding year. The curve is based on 382 recorded I–II–III continuants. At present it seems probable that 3,000 pages marks the saturation point, unless sacrifices are made in other aspects of the work.

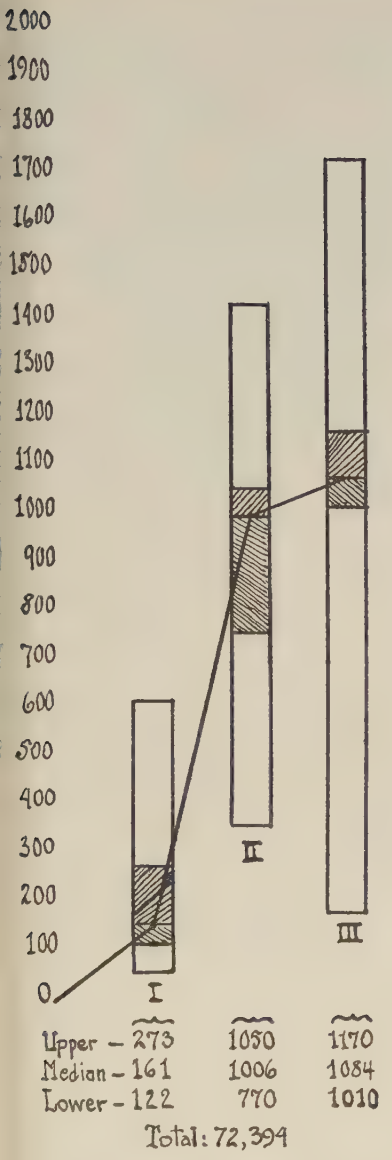


FIG. 2.—Range of extensive reading scores in French, first-year sequence, 1927–28.

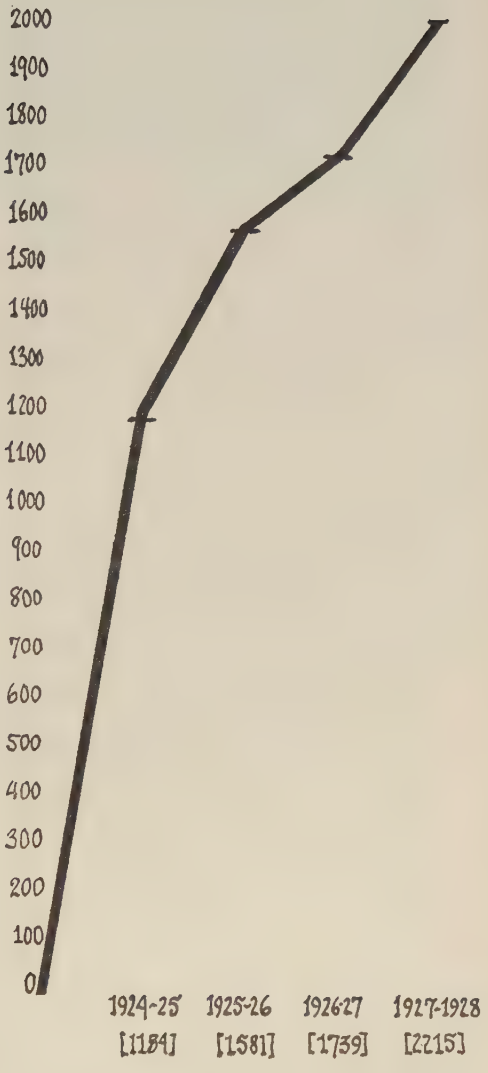


FIG. 3.—Average number of pages read in extensive reading by each student in French, first-year sequence, 1924–28.

It is impossible to list here the material read by even the two groups represented in Figure 2. Their aggregate reading amounted to 72,394 pages. However, two groups of Unit III students in the Spring Quarter of 1926 listed 188 titles of novels, short stories, plays, anthologies, histories, critical, scientific and philosophical works, of which the following are examples: Rostand, *Cyrano de Bergerac;* Maurois, *Ariel;* Loti, *Jerusalem;* Mâle, *Art of the Middle Ages;* Renan, *Life of Jesus;* France, *Life of Joan of Arc;* Poincaré, *Value of Science;* Jusserand, *Shakespeare in France;* Moncalm, *Origin of Thought and Speech;* Rolland, *Musicians of Bygone Days;* Beaumarchais, *Barber of Seville;* Reinach, *History of Religions;* Hémon, *Maria Chapdelaine;* Daudet, *Tartarin of Tarascon;* and novels by Balzac, Loti, Hugo, France, etc.

It is needless to inquire as to how this material was read! More or less "hit or miss," surely, but it is conceivable that the readers profited by the adventure, even though complete comprehension was lacking at times. A student controlling his own selection without hope of external rewards or promise of grades, reading from this list without grumbling or querying, must surely have profited therefrom much as he would in reading similar literature in English. However, we have the objective proof of his reactions to his reading in the reading reports[14] filed weekly with his instructor. These reports leave little room for doubt.

As a final gesture, there is the correlated reading in Unit III. Figure 4 summarizes the achievement of 78 students in correlated reading in the successive Spring Quarters of 1926 to 1928, inclusive. It indicates a total of 31,461 pages, or an average of 403 pages a student, covering nineteen general subjects,[15] ranging from

[14] O. F. Bond, *Extensive Reading Report Blanks* (University of Chicago Press, 1926).

[15] *English:* Shakespeare, romanticism, poetry, drama; *history:* modern European, medieval, European colonial, modern England, French Consulate, Russia, French Revolution, Spanish Revolution of 1820, etc.; *political science:* comparative government, political psychology of the American people; *political economy; sociology:* French civilization, social customs, group and community study; *chemistry:* organic, quantitative, qualitative; *physics; geography:* Argentine, North America, rocks and soil of France and Germany; *geology; general science; botany; mathematics:* elliptic function, probabilities; *medical sciences; Latin:* Horatian odes, Cicero, Roman life; *psychology; philosophy; Spanish; art:* architecture, music, composers, history of dance, history of art, history of costume, general survey of art.

6,712 pages for English (Fig. 4) to 249 pages for the medical sciences.

The student range in correlated reading is indicated in Figure 5: 12 read in the norm (the 400 range) and 18 in the higher ranges,

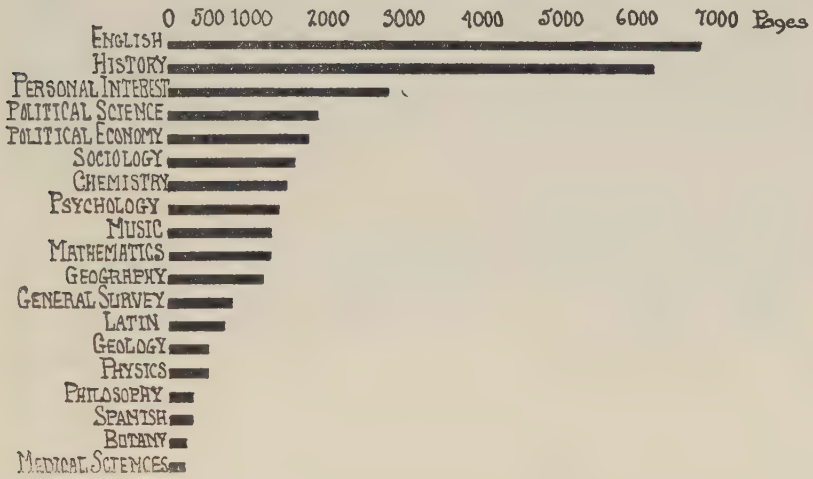


Fig. 4.—Distribution of correlated reading in French III, 1926, 1927, 1928

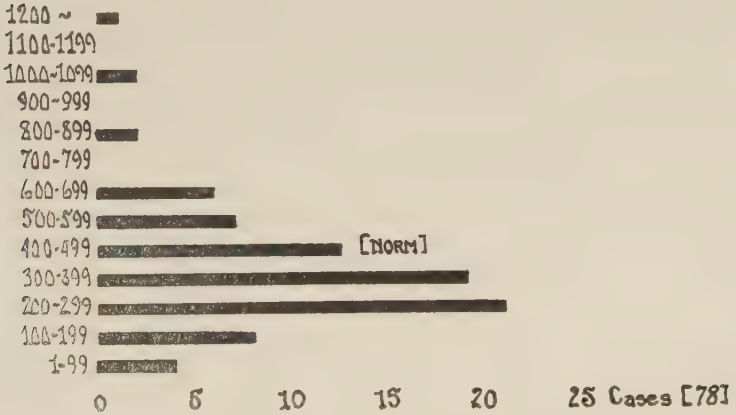


Fig. 5.—Range in correlated reading in French III, 1926, 1927, 1928

with one student reading 1,200 pages in French on English drama, poetry, and related French material.

Figure 6 indicates the uses made of this correlated reading. Twenty-four students used it for general background, 18 made use

of it in term-papers and themes, 16 in classroom activities, 14 in various reports, and 4 in preparing for final examinations. Twenty-eight made no formal use of it, giving as their reasons a lack of encouragement or opportunity in the courses correlated—an ironic commentary on the *pro forma* attitude of some departments toward the modern language requirements. All readers, save 9, liked to do correlated reading. In Figure 7 we note that 27 saw in it a different point of view; a like number saw a tool value in it; 15 found in it original sources; 13 found new values of appreciation. They of-

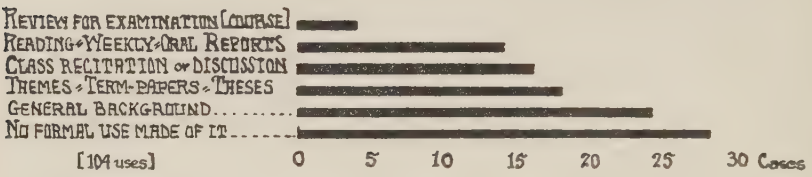


Fig. 6.—Use made of correlated reading in French III, 1926, 1927, 1928

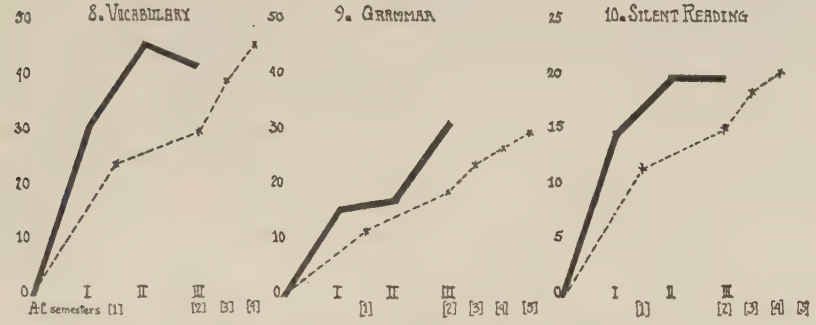
Fig. 7.—Reason given in favor of correlated reading in French III, 1926, 1927, 1928.

fered sixty-three suggestions for the improvement of this feature of the course. Is this not correlating a college course with living?

Figures 8, 9, and 10 show the first-year achievement unit by unit in vocabulary, grammar, and silent reading, as measured by the American Council Alpha tests in 1927–28. The cases number 253, 240, and 254, respectively, for Units I, II, and III. The heavy line represents the junior-college performance; the light dotted line represents the American Council semester rating for colleges. Only norms are indicated. These figures present a picture of the year's grist.

In vocabulary (Fig. 8), the year's showing is slightly less than the A–C college rating for four semesters, after having equaled

that norm at the close of Unit II. In grammar (Fig. 9), the final norm rises above the fifth semester A–C level of 28.9. The junior-college norm is 32.1 (range 25.5/33.5). Is it possible that in a one-year non-grammatical course an ability equal to that secured in two and one-half college years elsewhere has been gained by the average student? If so, what of the upper quartile? The junior-college norm in silent reading for Unit III is 20, nearly equal to the A–C fourth-semester rating (Fig. 10). Note the leveling off at the close of Unit II to make way for the grammatical splurge in Unit III.

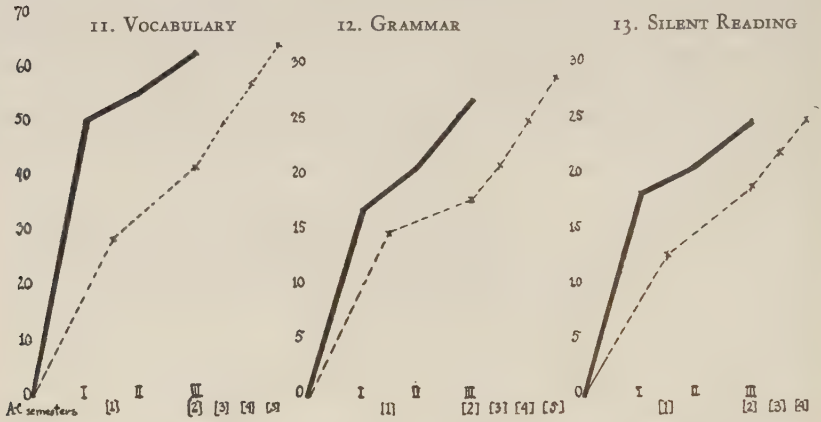


Figs. 8, 9, 10.—Norms in American Council Tests in French I, II, III, 1927–28

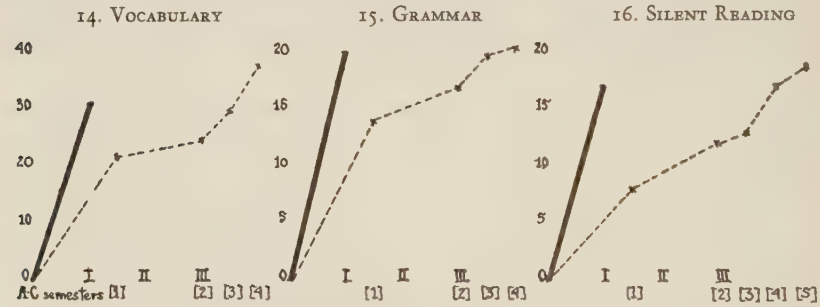
The Spanish test results show a similar equivalence for the junior-college students to the A–C rating for two college years (Figs. 11–13). In German, for which the autumn, 1928, graph for Unit I is alone available at this time, the achievement in vocabulary is equivalent to that for three semesters; in grammar, for three semesters; in silent reading, for better than four semesters (Figs. 14–16). At this rate, the A–C ratings are not sufficiently high to measure German III!

But the mortality rate? someone asks. What is the percentage of loss by this crowded procedure? The evidence presented in Figure 17 is significant, despite the fact that it is based on instructors' final grades. Since but two changes have been made in the staff in eight years, the personal factor is reasonably constant through the years. Note the gradual lowering of the failure line (*E, F*), year

by year, from 15.5 per cent in 1921 to 5.6 per cent in 1927, when the average reading score for each student was 1,800 pages. The increase to 8.2 per cent in 1928 is attributable to lack of control during the confusion of a transfer of the department and the re-



Figs. 11, 12, 13.—Norms in American Council Tests in Spanish I, II, III, 1927–28



Figs. 14, 15, 16.—Norms in American Council Tests in German I, Autumn, 1928

organization of programs in that year. The 5 per cent margin is not an impossible goal.

With the shrinkage in failures appears a corresponding increase in the honor grades (A,A—,B), which increase to 50 per cent in 1926 and remain at 41.5 per cent in 1928. The latter drop is due to the recently established (since 1927) practice of promotion, which

affects particularly the upper quartile of students in Units II and III. More than 100 sections and 1,000 students are involved in this record.

There remains the question of durability. In the period of 1920–25, all first-year French students were obliged to take a fourth French major if credit for the first three majors was desired.

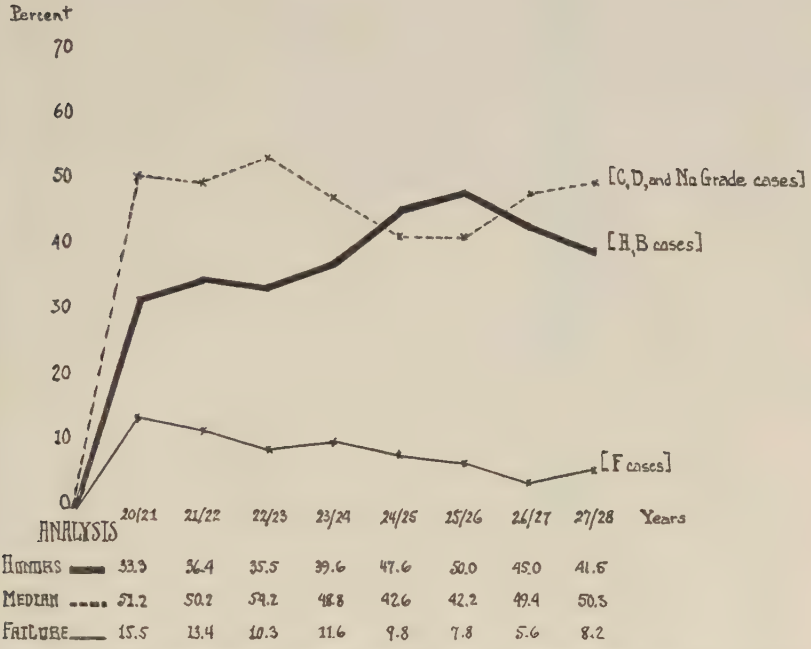


FIG. 17.—Percentage of distribution of honor, median, and failure grades in French I, II, III, 1920–28.

The fourth-unit course was administered by a different group of instructors and in another department, thus constituting a sort of check upon first-year sequence achievement. Figure 18 shows the respective performance in terms of final grades of junior-college students and non-junior-college advanced-standing college entrants, both registered in the second-year sequence IV–V–VI, 1920–25. The junior-college group received 44.4 per cent of the honor grades (A,A—,B) as compared with 35.2 per cent for the non-

junior-college group, a gain of 9.2 per cent in honors. Of the failure grades (D,E,F), the junior-college group carried off 6.2 per cent of them as compared with 11.5 per cent for the non-junior-college group, a gain for the latter at the wrong end of the scale.

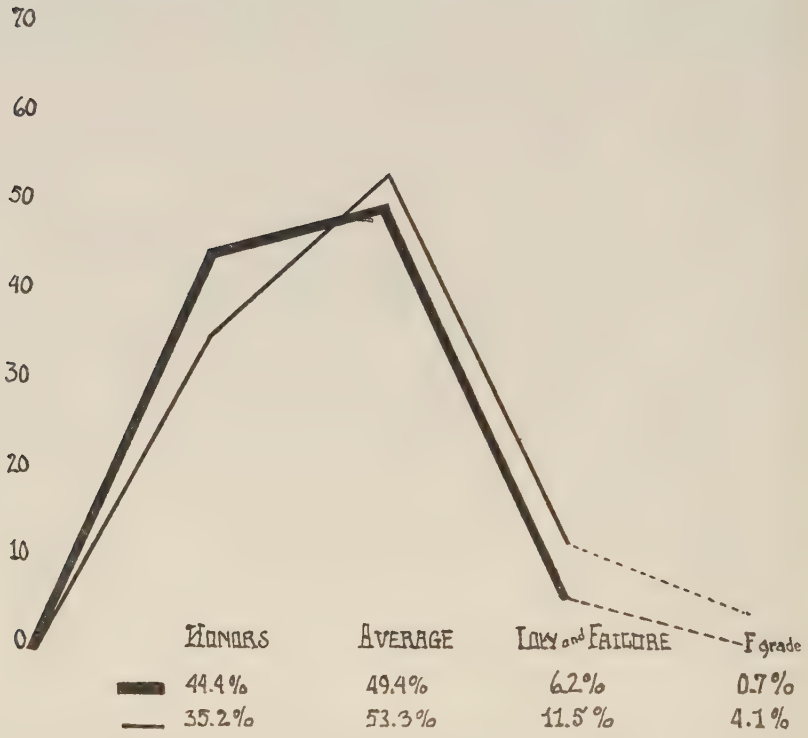


FIG. 18.—Percentage of distribution of final grades in continuation courses (French IV, V, VI) for junior-college continuants from I, II, III, 1920–25, compared with two- and three-unit entrants. Analysis: number of sections, 75; instructors, 13; student cases, 1,553 (469 junior-college, 1,084 non-junior-college); number of points, 4,415.

To evaluate this continuation performance rightly, the respective strength of the two groups should be compared (Fig. 19) with the 1,553 students involved; the junior-college group furnished only 30.3 per cent, although it received 33.8 per cent of the total number of grade-points. Their grade-point average was 3.18 points (better than B—); the average for the non-junior-college group,

2.69 points. Owing to changed conditions in the colleges, I am unable to give more recent data on continuations. But I am convinced that 0.7 of one per cent is still approximately correct as our index of failure in continuation from the first-year sequence, which was the index for 1920–25.

In conclusion, I should like to reassert that the procedure outlined in this article can be instituted with commensurable success anywhere at the college level, provided the following conditions be met, to a degree suited to the local situation:

First, a permanent staff, disciplined in the culture and life, as well as the language and literature, of the language taught, and open-minded to the advantages of the newer education.

Second, a thorough canvass of the social, intellectual, physical, and administrative conditions under which the instruction is to be given, in so far as they relate to the problem.

Third, orderly methods, with record-taking and filing, unit and standardized tests, reading collections, staff meetings, course programs, and a calendar. These are essential to economy and progress.

Fourth, the re-education of the student personnel along the lines suggested in this article, including training in "how to study a foreign language."

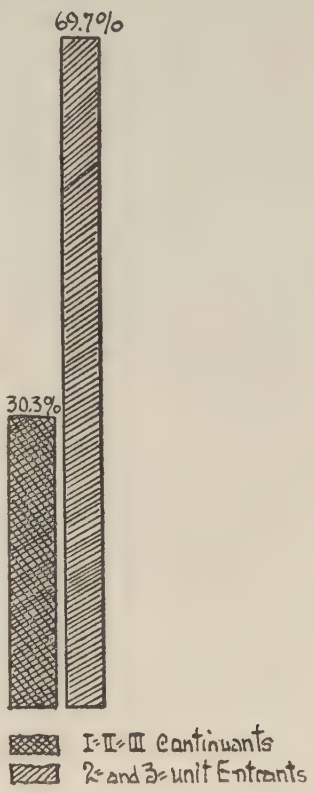


FIG. 19.—Comparative registration in French IV, V, VI, 1920–25. (Cf. Fig. 18.)

Fifth, the humanizing of student-faculty relations, involving case-study, conferences, individual projects, individual motivation, and the "open door" to the instructor's office.

But these conditions should be the common denominator of any junior-college course!

CHAPTER XV

JUNIOR-COLLEGE COURSES IN ECONOMICS AT THE UNIVERSITY OF CHICAGO

S. H. NERLOVE

Junior-college courses in economics at the University of Chicago have gone through two major readjustment stages and are now in the third. During the early years, roughly between 1893 and 1898, very little junior-college work in economics was offered. The superior students were able to take four courses, some were given the opportunity to take two or three, but most of them were either given the chance to take one elementary course or advised to wait until they entered the senior college. The courses offered were: (1) principles of political economy, an elementary course in which the "laws" of political economy were presented; (2) advanced political economy, a course attempting to accomplish the same objectives as the elementary course on a higher level; (3) descriptive political economy, a course dealing with the industrial system mainly in terms of a study of industries; and (4) economic and social history.

By 1898, although practically the same four courses were being offered to junior-college students, more of these first two-year students were encouraged to take work in economics. The catalogue in that year definitely divided the offerings in economics into junior-college courses and senior-college courses, and the prerequisites for entering these courses were decidedly more lenient than they had been before.

Very little change in the character of the courses occurred until 1903. Occasionally a course called the "Processes of Leading Industries," or one named "Modern Industries" was substituted for the fourth course, descriptive economics. But that was all.

In 1903, however, the offerings were increased by two courses. In addition to the four courses mentioned, a course in the history

of commerce was instituted and one in commercial geography. This obviously meant that some junior-college students were now given the opportunity of taking six courses in economics.

Then for approximately eight years practically no changes of any significance occurred. Here and there either the title of a course was changed or a course was temporarily dropped. From the point of view of the junior college, however, two encouraging things were happening. First, the economics department was beginning to think of its first two-year offerings in a more or less organized way. The courses mentioned were, during the latter part of the period, divided into two groups: theory courses and historical and commercial courses. The first group contained the two courses in principles of political economy and the second consisted of commercial geography, history of commerce, and economic history of the United States. And, second, the number of economic course offerings to first two-year students was being enlarged.

It is probably appropriate to call this period of fourteen years between 1898 and 1912 the "Principles and Applied Economics Course" stage in the junior-college offerings, a stage of development from which apparently a large portion of our four-year colleges and independent junior colleges have not yet emerged. Practically all of the Freshman and Sophomore economics in these colleges unfortunately still consist of one or two "orthodox" economic-theory courses and a number of pathological economic-problem courses. And in so far as change is discernible during this stage, it usually takes the form, as it did at Chicago, of increasing these problem courses dealing with the pathology of economic society without much rhyme or reason.

At Chicago, however, as early as 1912 we decidedly broke away from this kind of curriculum. A number of significant changes began to be made which culminated in the first major readjustment by 1916.

The offerings were almost doubled in 1912. In addition to the two elementary courses in theory, seven intermediate courses were organized dealing with money and banking, labor conditions and problems, economic organization, introductory accounting, eco-

nomic history of the United States, taxation and finance, introduction to statistics, and elements of law. Now there were available to students ten courses in economics. The junior-college work was for the first time, as far as courses are concerned, established on an adequate basis. What is much more significant, the contents and the titles of these courses indicate that they were being established in terms of an organized notion of a junior-college curriculum. The theory underlying this curriculum was that economics should deal primarily with the anatomy and physiology of our industrial system instead of its pathology. Accordingly, on the basis of an introductory sequence of elementary courses dealing with the industrial system as a whole, two types of courses were being built: (1) courses that were devoted to a more detailed analysis of certain significant features of industrial society in terms of functions; and (2) courses that provided training in such matters as statistical method, accounting, and law.

This readjustment in economics courses for the junior college was brought to a head, as far as courses in the catalogue were concerned, by 1916. In that year the junior college, in accordance with the new curriculum theory, divided its economics offerings into two major groups. One group was called the "Introduction or Survey Courses," and the second was called "Intermediate Courses." In the first group three courses were offered: (1) industrial society, a general survey course attempting to give an aeroplane view of our industrial system; (2) value and distribution, a theory course with the objective of studying the "laws" of value and distribution, more as a tool for thinking than as an end in itself; and (3) business administration, a survey course indicating how a business manager would administrate his various economic problems, in a sense a look at our industrial system through the eyes of a business manager. The second group consisted of the following courses: (1) economic history of the United States; (2) financial organization of society; (3) labor conditions and problems; (4) social control; (5) risk and risk-bearing; (6) market functions and structures; (7) statistics; and (8) accounting. With very slight and minor changes this regimen of courses was offered until 1923, a period of roughly seven years.

This second stage might be called the "Industrial Society Survey and Functional Course" stage, a stage of development into which as yet very few but fortunately an increasing number of four-year colleges and independent junior colleges are moving.

It is evident from the foregoing discussion that the functional system of economics courses was developed during the seven-year period between 1916 and 1923. The fact merits emphasis that this system of courses was based on a curriculum theory quite different from the one that was apparently used in the earlier period. Instead of having economic courses that merely dealt with either the history or the pathology of our economic system, the courses during this stage attempted to emphasize the anatomy and physiology of society. After the students were introduced to our society by a survey study of its significant features and given some drill in economic theory, they were then able to take a series of courses that dealt with the major activities or functions being performed in accomplishing the economic work of society. In addition they were offered "tool" courses dealing with quantitative method, history, and law which would be exceedingly useful in understanding these major activities, and for advanced work in the economics field. Quite evidently this curriculum consisted of a comprehensive, related, and balanced scheme of courses and not merely a series of problem courses haphazardly organized. It is here that we see the early fruits of the exceptionally able work of Professor L. C. Marshall,[1] work which has been influencing very decidedly and significantly curriculum-building in economics at both junior- and senior-college levels and now promises to reorganize the present course offerings in other social studies, particularly law.

But the Chicago group under the stimulating and energizing leadership of Professor Marshall was not satisfied. It wanted to do more than just build a system of functional courses in economics after it got away from pathological problem courses based only on "orthodox" theory courses. And so another transition period was entered into in 1923. First, the business administration course was taken out; then the value and distribution course as part of

[1] Professor L. C. Marshall is now Professor of Law and a member of the staff of the Institute of Law, Johns Hopkins University.

the introductory sequence was omitted; and, finally, the course in industrial society and practically all of the intermediate courses were scheduled to be dropped. By 1925 we were launched on a new program, the second major readjustment in junior-college offerings in economics.

It is this readjustment we shall discuss in greater detail because it represents a reorganization of junior-college offerings in economics which has attempted to take full cognizance of (1) the recent developments in economic studies; (2) the great changes that are taking place in elementary and secondary schools, and particularly the junior-college movement; and (3) the newer developments in college and university education. Above all, it is the result of the mature judgment of Professor L. C. Marshall, one of the best informed economics and business educators in the United States.

This new program begun in 1925 called for the following first-two-year economics courses: a three-major or one-year orientation survey course dealing with the economic order; and four tool-skill and tool-knowledge courses which were to form the basis and introduction to an advanced series of courses: one in economic theory; two courses in quantitative method, one in statistics and one in accounting; and a course in economic history of the United States. Two additional tool-skill and tool-knowledge courses were to be instituted at some later date, a course dealing with the technological background of economic study and one dealing with the legal background.

The orientation course was to be developed so that it would give students a notion of the evolutionary and particularly the transitory character of economic systems, reveal the basic processes of our own and other industrial societies, present an adequate picture of our economic institutions and the existing economic driving forces. Emphasis was to be placed on the processes. All else was to be subordinated to them.

Accordingly, the economic order course that is now being offered is divided in terms of basic processes into three major parts. It considers, first of all, the basic process: production of economic goods. It is pointed out here that all conceivable economic systems

have had to perform somehow this process, and that a large number of institutions and devices have evolved to aid in the task of producing goods. These matters are discussed in addition to the outstanding problems connected with, or arising out of, the need for carrying on such work. Then, the basic process of market-co-ordination of specialists is studied. Here it is pointed out that every conceivable specialized economic order has somehow to co-ordinate its specialists, and that most of them in accomplishing this task make use of the market. To aid in carrying on this process a large number of institutions and devices have evolved and are continually being changed and augmented. The outstanding valuation, price, and distribution problems are considered in this connection. Finally, a part is devoted to the process of social control. The need of control forces other than the kind of forces the market affords is here considered, and, of course, the influence on well-being of such institutions as custom, law, government, and minor groups is studied. All of these three major parts are prefaced by a discussion of early social organizations and the emergence of the modern order.

Obviously, this course includes everything of significance that was presented in the earlier functional courses. But it presents it in a different way. It presents it in an integrated fashion, the basic processes being emphasized and everything else being related and subordinated to them. The result is that the students have an excellent chance of getting an extraordinarily comprehensive, related, and balanced picture of the functioning and structure of our industrial system, a picture it would be exceedingly difficult to get by piecing together the bits received in various functional courses given separately.

I have often felt that the difference between our old offerings in economics for first two-year students and our present economic order course is adequately illustrated by the decided difference one would readily observe between two pictures showing children playing at the beach, if one of these pictures emphasized the children and subordinated the background and the sun while the other emphasized the sun and made the children tiny specks on the

shore. Of course, we hope that our economic order course at the University of Chicago is emphasizing the sun.

Following this survey and orientation course on the whole industrial system the program calls for tool-skill and tool-knowledge courses. The objective of these courses is to make it possible for the students to see more clearly than they otherwise would this industrial society of ours in operation and to prepare them for further work in economics or business. Accordingly, courses were to be offered giving them an understanding of economic theory, economic historical development, and quantitative method. If our plans of 1925 were to be completed, courses would be developed for junior-college students that would give, in addition, an understanding of the technological and legal background of economic study. At present courses covering these two kinds of tool-skills and knowledges are available to senior-college students.

It should be noted here that although we were intending to establish a number of courses, all of them were to be very definitely related and balanced in terms of an organized notion of a curriculum. Unfortunately, the word "course" very often connotes a formal presentation of a segment of a given field of study. In so far as possible the curriculum suggested in 1925 attempted to emphasize the field of study by subordinating individual courses to a group that adequately covers the entire economic field and by individualizing our instruction.

This stage in our development of junior-college offerings in economics we can appropriately call the "Economic-Order and Tool-Skill and Tool-Knowledge Course" stage. We have moved from the "Principles and Applied Economics Course" stage to the "Industrial Society Survey and Functional Course" stage, and finally to our present offerings.

The offerings in economics planned in 1925 for the junior college would have probably taken care of (1) the incoming students, (2) the students who are unable to remain after the first two years, and (3) the students who expect to concentrate in the field of economics in a much better way than was possible under our previous first two-year curriculum.

Perhaps for the first time we would be able to offer appropriate

introductory work to three types of incoming students: the students who expect to specialize in economics; the students who know that they will not specialize in economics but want introductory work for the purpose of either obtaining a general education or as an aid to work in related fields; and the students who have not determined upon a field of concentration, but are trying to find one by surveying various existing fields of thought.

Those students who are unable to go on to the senior college would be in a position to terminate their work in economics without interfering in any way with its completeness. Heretofore this was very difficult to accomplish, in many instances impossible.

The students who expect to continue their college work beyond the first two years would be given the opportunity to move on with adequate training and quickly to specialized concentration work in the field. The economic order course attempts to give them in the short period of one year a survey of the functioning and structure of our industrial society in three majors. In a sense it presents the entire field of economics and is an excellent introduction to the method and literature of economics. The courses that were to follow would give the students the tool-skills and tool-knowledges necessary. The economic theory course would give them additional drill in theoretical method useful in economics. The accounting and statistics courses would give them the ability to use quantitative method effectively, and the economic history course would give them an understanding of historical development and afford general background material.

In setting up this curriculum for first two-year students, the newer changes occurring in the development in economic studies were taken into consideration. That is the explanation for the great emphasis on quantitative method. Cognizance was taken of the recent development in social studies in elementary and secondary schools. Accordingly, the contents of these courses, particularly the economic order course, was to be put on a higher plane than the three survey courses that were offered prior to 1923. Above all the newer philosophy in college and university education of fewer formal courses and more individualized research work has been very emphatically taken into consideration. This is one of the ex-

planations of why we substituted the economic order course for roughly seven to eight intermediate courses. We wanted to save time and get the students into research as soon as possible. What is more, these first two-year courses were to be built so that the instructors would be able to impart knowledge imaginatively, so that the facts that were presented would in all probability be illuminated, not bare, invested with their possibilities and consequently an energizing influence and not a burden to the mind. Upon these junior-college offerings in economics could then have been built a curriculum of concentration that would have been far from the old mechanized, course-serving, and credit-amassing type. Instead it could have easily been the much more flexible and effective individualized-instruction-through-research kind.

A word or two about what we have actually done with respect to the program started in 1925. It was operated as originally planned, with some exceptions, until 1928. In that year, however, the Economics Department decided that the program for junior college courses was not a feasible one. The prerequisites on the economic theory course and the statistics course were raised, making them senior-college courses. Two courses that the original plan did not call for were instituted: a general survey course of European economic history and a course in the introduction to money and banking.

At present, during the academic year 1929–30, the offerings to the first two-year students are a one-year orientation survey course (the economic order), a course in accounting, one in economic history of the United States, one in European economic history, and a course in money and banking.

It is my own opinion that we will take a decided step backward if we continue as we are and do not move forward in the direction suggested in 1925. Our junior-college offerings will be little better than those given during the "Industrial Society Survey and Functional Course" stage. The explanation given for the change in plans is twofold. First, it was felt that, under the program of 1925, an insufficient number of courses were going to be offered to undergraduates. And, second, that such courses as, for example, intermediate economic theory and introduction to statistics could be

handled effectively only at the senior-college level. Perhaps these changes are necessary because of the exigencies of present conditions. The unfortunate feature of the situation is that we have shifted from a very promising program without having given it a chance to show its worth to one which is a sort of cross between the offerings given in the "Industrial Society Survey and Functional Course" stage and the courses that were to be given in the "Economic-Order and Tool-Skill and Tool-Knowledge Course" stage. Fortunately, however, we have retained our economic order course (almost in its entirety), one tool course, accounting, and one tool-knowledge and background course, economic history of the United States. The particular contribution to junior-college offerings in economics that we have retained is, of course, the economic order course. It alone justifies the effort put on our last readjustment.[2]

[2] Professor Marshall has revised his well-known *Readings in Industrial Society* to conform with the syllabus, *Outlines of the Economic Order,* now being used in the economic-order course.

CHAPTER XVI

THE SURVEY COURSE IN GEOLOGY

E. S. BASTIN

The geology survey course at Chicago was organized to meet an educational problem which is not in any sense a new one, but a very old one in aggravated and aggravating form. Schoolmasters have doubtless perennially regarded the period of tuition of youth as too short, and youth has consistently lamented it as too long. In recent years, however, the old problem has become immensely more acute. Within the last quarter of a century the boundaries of knowledge have been extending much more rapidly than ever before, and if the professor is appalled at the volume of new information in his own field with which he ought to, but cannot, keep abreast, what must be the plight of his students? With this great increase in the volume of human knowledge has gone no corresponding increase in the time devoted to university education, or in the rate at which the individual youth can assimilate the knowledge placed before him. It is true, indeed, that medical science in countries like our own has added many years to the average span of human life, but we have preferred to add these years to the period of productive accomplishment rather than the years of preparation.

It seems to me fairly obvious that one of the avenues of escape from this dilemma lies in a more conscious effort to train the student in the technique of drawing for himself a larger share of his data directly from the common wells of human knowledge that constitute our libraries and our museums. Survey courses, however, represent a second method of attempting to meet the problem, for they try to pass on largely by word of mouth the wheat of knowledge freed from the chaff, and containing the germs out of which new intellectual life may grow.

The general science survey course entitled "The Nature of the

World and of Man," which was also developed in this University, is in part a cultural course and in part an orientation course designed to aid the student early in his university life in acquiring, if he has a scientific bent at all, definite preferences for certain fields of science. In the geological survey course the orientation function is lacking, and the aim is purely cultural and distinctly not professional. The survey course in geology was given for the first time in the Autumn Quarter of 1928 and repeated in the Spring Quarter of 1929. It is intended for under-classmen who have no advance intention of taking further courses in geology. The usual elementary courses in geology had previously been taken by two distinct classes of students: those who only wanted to get a general idea of the subject and those who intended to specialize in the field to at least a modest extent. Since the organization of the survey course in geology, the scope of the other elementary courses has not been materially altered, but those seeking only the general cultural benefits of the science have been guided into the survey course and those seeking a fuller familiarity have been guided away from it and into the more thorough courses. The usual elementary geologic classes have, since the Department was founded, been limited to a small group of thirty-five students, and several sections of a given course were, therefore, necessary each quarter. The survey course was not restricted and the attendance has numbered around 125. A useful consequence, not fully anticipated, has been that it has become possible to cut down on the number of sections of the small elementary classes and the time thus saved to the teaching staff has been diverted to research and advanced teaching.

The strongest motive in the establishment of the survey course in geology was frankly evangelical. We believed that geology had a message of high value to give to the average educated man and woman and one to those who could not afford to devote a year's time to the science, and we believed that the message could be conveyed in its essentials in twelve weeks rather than in thirty-six. Geology tells more effectively than any other science the story of the steady development of life on the earth from the simplest forms to the most highly organized, and it conveys with great im-

pressiveness the lesson of the vast periods of time involved in this slow progress. It is, in short, immensely valuable in giving a picture of life in its larger perspective, and few can become familiar with its story without being profoundly affected in their philosophy of life. Enriching in very different ways is the understanding which geology gives of the origin and meaning of the beautiful and often majestic forms of the landscape and in revealing the important rôle which the materials of the earth, its fuels and its ores, play in ministering to the well-being of man.

The survey course in geology, extending through a period of about eleven weeks, begins with the consideration of those common geological processes, more familiar to the layman, that shape the landscape—the work accomplished by the wind and rivers, by glaciers and by ocean waves and currents—and proceeds from these to the less familiar processes of volcanic action, the crumpling and fracturing of the rocks. With this picture of the earth as it exists today in mind, the probable origin of the earth is considered, and this obviously requires some attention to its setting in the solar system and the universe. The materials of the earth are next considered—the commoner minerals and rocks. The story of the physical changes through which the earth has gone from early geological times to the present is then unfolded—the shifting positions of land and water, the birth and destruction of mountain ranges, the changing climates of the past from aridity to glaciations of continental magnitude. The physical history is followed by the story of the ascending and diversifying progress of life development—plant and animal—through the ages to the final appearance of man. The course closes with a brief account of the rôle which geology and particularly mineral resources have played in the industrial progress of mankind.

Seven members of the regular staff of the Department participated in the course for periods varying from one to four weeks. A poll of student opinion taken at the close of both quarters clearly indicated that they relished the opportunity for acquaintance with many instructors rather than with one, and appreciated the fact that each was a specialist speaking out of a mature knowledge of that phase of geology upon which he lectured. Some defects in the

co-ordination and unification of the work of different instructors will disappear as time goes on. It has been suggested that the course would be more effective if given by one instructor—the best lecturer of the group—but considering the range and diversity within the field of geology, my own opinion would be that more would be lost than gained by such a change. With a class of 125 the lecture method had to be adopted, but written quizzes were given at the conclusion of the lectures by each instructor and in some cases oftener. One field trip and a visit to the geological collections of the Field Museum were required. A two-hour written final examination concluded the course.

A lithoprint syllabus for the course has been prepared which is on sale at the University bookstore. It is possible that this will later be supplemented by a text. Two student assistants, advanced students in geology, read and graded all examination papers, were available for consultation with students having difficulties with their work, and assisted in several other ways. At the conclusion of the course each student was asked for a brief expression in writing, unsigned, as to whether the survey courses were worth while in contrast to more thorough courses of narrower scope and as to the benefits that they felt they had gained from this particular course. They were asked, also, to suggest means of making the course more effective. The following quotations are fairly representative of the majority opinion which was distinctly favorable to the course:

> Survey courses are very worth while educationally because they give one an opportunity to learn the fundamentals of a large field in a short time, which without the survey course the student would have to miss because of a limitation of time in his college courses. It is foolish to think that a student can take enough thorough courses of limited scope to really broaden his views of the world, so that survey courses are just what he needs in branches of education outside his own particular field. I expect to specialize in the field of law and in preparation for that work I need a general knowledge of almost every branch of learning and this course in geology has given me just that in its field.

And again,

> It is always interesting to get the reaction of more than one professor and it is helpful to note the different ways in which a subject may be presented.

Again,

> I feel that survey courses are worth while as contrasted to more thorough courses of limited scope. This is my third quarter of survey courses and I am beginning to see where I can plan a program for my college course. . . . . Without doubt survey courses are very illuminating on a variety of educational subjects and as such deserve a continuance in the University.

On the other hand, a few of the comments were less flattering as in the case of the student who found that

> survey courses used as a side subject to the other courses in which one is specializing are very good. They give one a chance to put in more time on the other subject.

The established practice of the Department since its foundation has been the use of the discussion method with small groups of students, numbering not more than 35. It is not surprising that some members of the staff should look askance at the use of the lecture method and at classes of 125. Most of the staff feel, I think, that the course constitutes a rational attempt to meet an educational situation of growing difficulty, and as such it has been successful. Whatever shortcomings it has relate largely to details of management which will be corrected as time goes on. One modification which will be adopted next year is the inclusion of several conference periods during which the students will have an opportunity to ask questions and to clear up points that are obscure.

CHAPTER XVII

FRESHMAN COURSE IN THE HISTORY OF CIVILIZATION

HARLEY FARNSWORTH MacNAIR

The course now offered in the University of Chicago as history of civilization may be said to be in the third stage of its development, if we disregard the regular history courses offered to Freshmen prior to the academic year 1924–25. During the academic years 1925–26 and 1926–27 a survey course in the social sciences was offered. This gave way to a three-quarter course in the history of civilization presented by the staff of the History Department only.

Although this course is designated as a history of civilization, it falls short, at present, of being what it claims to be. It is a history of the foundations and development of western and modern civilization. Beginning with a survey of the preliterary period of man's life in Europe, that is, man of the Stone Age, it shifts quickly to Egypt and western Asia. The civilizations of this area are followed by a survey of those of Crete, Greece, and Rome. The Autumn Quarter ends with the decline of the Roman Empire.

In the Winter Quarter medieval European, Byzantine, and Arabic civilizations are covered. An attempt is made to present the outstanding factors of these civilizations and to make clear to the student not only their significance during the period of their greatness but also the significance of their contributions to the modern life of man.

The course during the Spring Quarter is, perhaps, more ideological in its approach and content than is the case in the other terms. The *ancien régime,* the enlightenment, the French Revolution, the commercial, mechanical, and industrial revolutions, liberalism, conservatism, romanticism, realism, nationalism, and imperialism, socialism, the development and contribution to man of

nineteenth- and twentieth-century science—these constitute the framework of the last quarter's study.

So much for the scope of the course as given during the years 1927–28 and 1928–29. This sketch of the content of the course makes clear the statement made in the foregoing that what is offered at present is a history of western civilization—not a history of civilization. As long as little or no mention is made of the cultures of India, Cambodia, China, Japan, and pre-Columbian America, and no attempt whatever hazarded at an analysis of these cultures and a weighing of their contributions to each other and to modern western civilization, it is self-evident that a history of civilization is not being attempted at present. As far as I am aware, no satisfactory course in the history of civilization is offered in any American institution.

When it was determined in 1926–27 that the History Department should offer the course described, several members of the staff set to work to prepare an outline and bibliography—the outline to be used by the staff of instructors, the bibliography by the students. The outline and the bibliography were used during 1927–28. A topic for study was announced to the students who then read in the library from a considerable number of volumes placed on reserve.

This system gave way in 1928–29 to that of rental sets and textbooks. Instead of reading parts of a large number of works, the student now purchases a text and rents from the University bookstore each quarter a set of books chosen by the History Department. He may also rent other volumes by the day from the bookstore. Of course, he may voluntarily supplement his reading in the library itself. The only *required* readings, however, are to be found in the texts and rental sets. The sets are rented at $3.00 a quarter.

The texts purchased by the students during the last year for the three quarters, respectively, were Breasted, *Ancient Times;* Sellery and Krey, *Medieval Foundations of Modern Civilization;* and Fueter, *World History 1815–1920.* The foundation text actually used during the third quarter was Schevill, *History of Modern Europe.* Fueter was used for supplementary reading.

For the first quarter the rental set includes Rostovtzeff, *History of the Ancient World,* Volume I; Myres, *Dawn of History;* Sedgwick and Tyler, *Short History of Science;* Hopkins, *History of Religion;* Gardner, *Art through the Ages;* Clark, *Great Short Biographies of the World;* Norwood and Duff, *Writers of Greece and Rome.* Volume II of Rostovtzeff and an *Atlas of European History* will probably be added to this set next year.

The set for the second quarter carries over the works of Sedgwick and Tyler, Gardner, and Clark, and adds Schevill, *History of Europe;* Randall, *Making of the Modern Mind;* Thompson, *Economic and Social History of the Middle Ages;* and Hulme, *Renaissance and Reformation.* For the third quarter the works of Sedgwick and Tyler, Gardner, Randall, Clark, and Schevill are carried over, and to them are added Matthews, *French Revolution;* Dietz, *Industrial Revolution;* Hobhouse, *Liberalism;* Dickinson, *International Anarchy;* and Beard, *Whither Mankind.*

A glance at these lists should make it clear that an attempt is made to study the life of the periods involved from as many angles as possible—political, social, economic, religious, artistic. Stated briefly, the approach is broadly cultural.

The course is a free elective meeting five times a week. Any undergraduate may enter, there being no attempt at a limitation of numbers or a choice of students on the basis of their grades at entrance. It is designed primarily for Freshmen students, who make up the great majority of the students enrolled. For senior-college students it is a limited credit course. There is no intellectual segregation; all sections are at least theoretically equal, students and instructors being allocated to sections on a purely arbitrary basis. The sections have ranged from twenty to forty-two in size, although thirty to thirty-five is the aim.

During the year just ended the instructors varied in number from four to six—five in the Autumn Quarter, six in the Winter, four in the Spring. An instructor is expected to teach two sections.

One instructor, designated by the chairman of the Department, is in general charge of the course—he is, however, merely *primus inter pares.* In conducting his sections the instructor is independent to all intents and purposes. No attempt is made to keep the

sections together. A period is to be covered during the quarter; the emphasis given to material is at the discretion of the instructor. Tests and examinations are made and given by the individual instructors.

The question and answer and class discussion methods are used in all sections. Small use is made of lectures. But the instructor does occasionally lecture informally, and during the course of the year several special lectures of a formal nature are given by faculty specialists in certain fields that are studied. The attention of the students is often directed to public lectures given at the University or in the city, likewise to materials in the museums of the city.

Term papers—one or two a quarter—are required of all students. The subjects for these are generally chosen by the students in consultation with the instructors, and deal with special phases of civilization which may or may not have been discussed in class. In the preparation of these papers the students use the University libraries as they do not ordinarily for their daily readings. Considerable attention is paid to method in the preparation of the term papers; especially is this so with regard to critical bibliographies. The papers vary in length from fifteen hundred to seven thousand words. Many of the papers submitted have been notably good. The students in general appear to have enjoyed writing term papers rather more than one might expect would be the case. A number of them have commented upon the fact that in the preparation of these papers they have been able to appreciate the meaning and the life of a period as they had not hitherto.

It may be asked, What is the object of this course and is the object gained? In other words, Is it considered that the course as given at present is satisfactory? By implication, at least, these questions have already been answered in part. In general, it may be said that the object of the course is twofold: first, to give to students who may not have had even secondary-school training in history and who may have no further training in history during their university career a survey course which will show them something of the basis and background of contemporary civilization; second, to present to others who may already be interested some-

thing of the scope of the social sciences so that they may intelligently choose courses in special fields for later study. An attempt is made first of all to present in a *factual* way the outstanding developments in the areas, civilizations, and periods covered. Next, in so far as time and the ability of the instructor and students permit, the generalizations and the enunciation of basic principles in the life of man are attempted. Man—not the state or institution—is the center around which a history of civilization must be centered. Such a course calls for breadth of knowledge, viewpoint, sympathy, and maturity on the part of the instructor.

The students have realized that the course as given at present is still in the experimental stage. They have been invited to offer criticism and suggestion and have done so. In general, it may be said that a very high degree of appreciation of the course as it has thus far been given has been made manifest. On the whole, it appears that the course is decidedly worth while. At the same time, the working out of a syllabus for the history of civilization—not the history of *western* civilization—and the offering of such a course are goals which undoubtedly should and will be attained within the next two or three years. Without a syllabus there cannot be maintained unity either among instructors or the materials to be used in the course. Students and leaders tend to lose themselves in a mass of material. A satisfactory syllabus is the corner stone of such a course as the University plans to give.

Obviously, no attempt should be made to give all of even the outstanding material having to do with the various civilizations. But the outstanding aspects of a culture, what it has contributed to the world at large, and what its present status is, in the case of an existing culture, certainly can be outlined and be presented in good faith as a history of civilization. In such a course considerable attention should be paid to the Asiatic civilizations east of Mesopotamia, for example, those of the Hindus, Khmers, Javanese, Chinese, and Japanese. Pre-Columbian civilization in North and South America must also be taken into account since by no means do all the roots of present-day America go back to Europe and Asia. Such a course as the one suggested would serve to arouse

the interest of American students in the life of a large and *important* part of the world today. It would show them that divergencies from American civilization do not necessarily constitute evidence of effeteness of civilization. It would aid in the de-provincialization of the youthful American mind and make it less profitable for enthusiastic editors of popular journals to pen such words as those found in the *Ladies' Home Journal* for August, 1923: "There is only one first-class civilization in the world today. It is right here in the United States and the Dominion of Canada. Europe's is hardly second-class, and Asia's is about fourth to sixth class."

CHAPTER XVIII

JUNIOR-COLLEGE SURVEY COURSES IN ART

E. F. ROTHSCHILD

A consideration of the curriculum locating the fine arts in the program of the liberal arts college is particularly timely. Various indications point to an increasing aesthetic consciousness and also to a liberalized interest in the study of man's culture as a study of man. Institutions of higher education in increasing numbers aim to include or expand facilities for the teaching of art.

Our concern here is with a critical justification of the movement which has spontaneously developed and found for itself a wide reception, and with a specific inquiry into its relation to the junior-college curriculum. The former consideration will serve as a background of our discussion. The latter deserves a preliminary comment.

The junior college contains three classes of students taking courses in art. One group is interested in art as an essential to the general cultural background which the liberal arts college is supposed to provide. Their contact with the department as far as courses are concerned is likely to be brief. The second group, in addition to its interest in art as an aspect of general culture, is concerned with a further study of the field leading to specialization. The third group is seeking to determine to which of the other two groups it will ultimately belong.

For our purposes, it has seemed reasonable to make no qualitative distinctions in the curriculum for these two groups for the following reasons:

1. The junior college is presumably a period of orientation in which the student is seeking to discover which of the various fields viewed summarily shall be selected for special concern. In other words, the distinction in many cases derives from a subsequent choice.

2. Each field which the student enters by way of orientation will become significant only if its curriculum opens up new attitudes and opportunities. His experience is worthless if it supplies an arbitrary unit complete unto itself which establishes clichés and classifications without techniques and attitudes. The distinction between the two principal groups of students in their later development is simply that the general orientation group will carry on their contacts with the field independently, with the instruments, techniques, and attitudes developed, and the specialists will be further directed in the application of their methods to a more complete range and a larger quantity of material. Orientation should mean the opening of a lucid way of approach rather than the termination of an interest by a closed and arbitrary unit of ideas.

3. The secondary-school experience of students in art is likely to be of such wide variety that it must largely be discounted and a new and common point of departure established for all students.

The wide interest in the development of the fine arts curriculum is both gratifying and serious. It is provoked by a realization of our ignorance of, and lack of understanding for, aesthetic significance and the history of the arts, which, in itself, if we are candid, should warn us to proceed cautiously. We are calling for something which we lack, and lacking do not comprehend, and not comprehending may not foster intelligently and sensitively.

We are steeped in the ways of academic procedure. We are immured with the traditions of the intellect fostering science and humanism. It must be recognized that the problem of teaching the arts cannot be entirely solved in these terms. It must be realized that in the face of disagreement among those who have already approached the problem sincerely, new endeavors must be experimentally guided. The technique may be scientific although the subject matter of our field is not. But the technique must always be developed with the subject matter as the primary consideration.

In defining the nature of art as a field of investigation, its differentia must be observed and the separable phases of its complex character must be suggested. Art deals with the sensuous aspects of reality as ultimate qualities instead of as instrumental qualities or symbols. Its forms are intrinsically sensuous forms rather than

forms whose existence is reflected in sensuous properties. Our avenues of perception are sensuous. The senses are our means of contact. Therefore, sensuous materials are for knowledge instrumental; for art, they are ultimate. The doctor is interested in the redness of the blood as an index of the percentage of red corpuscles therein. The artist is interested in the redness of the blood as redness. Santayana remarks that art is "an ulterior synthesis of the sensuous," and also, speaking of the plastic arts, that "art does for appearance what nature does for existence."

The study of art must recognize the separable phases of the subject.

1. Art is directed toward the senses and the emotions. It has to be seen and felt. A concern with this phase is the appreciation of art.

2. The monuments of art provide a record of (*a*) the history of seeing and (*b*) the history of culture. These phases provide aspects of the history of art.

3. Artistic production is a manual process. Its investigation is a study in technique.

There are, of course, other phases in which art becomes part of the subject matter of philosophy (aesthetics), psychology, religion, etc. Our curriculum, however, is largely based on the division suggested in the foregoing.

The service of an analogy might make the problem more concrete and obvious. A work of art is an immutable monument which can be seen in many different ways or in different settings. A mirror is a permanent material device in which we can see diverse reflections, depending on our position and the things exposed. The work of art as an aesthetic entity is like the mirror when its reflections are discounted and only the thing itself is seen. In its historical setting, the work of art is primarily the reflection of culture as a matter of nationality, chronological period, etc.

It is primitive to see only the mirror or only the reflection. Likewise it is primitive to see only the aesthetic value of a work of art or only its historical value. The latter is the more frequent and the more grievous practice.

In every visual experience there exists material potentially

instrumental and potentially final. In normal language the one phase is productive of humanistic values, the other of aesthetic values. The former may be rationalized, classified, and, in general, dealt with logically. The latter may not be dealt with thus because they are *felt* and therefore belong to a different realm of experience. One might remark at this point that whereas there may well be an art of logic there is no logic of art.

Methods of instruction are generally devised to take care of a logical subject matter. Our problem in art appreciation is the development of methods approaching the *felt* as the effective quality in the subject matter.

Referring to the aesthetic content of the work of art, Havelock Ellis remarks in *The Dance of Life:* "Schopenhauer long ago pointed out that a picture should be looked at as a royal person is approached, in silence, until the moment it pleases to speak to you, for, if you speak first you expose yourself to hear nothing but the sound of your own voice."

Traditional curriculums are at odds, and no one of them seems satisfactory. They might be classified according to the following types:

1. An exclusive interest in archaeology; the description and investigation of extant vestiges of ancient cultures as an illustration of literary knowledge of those cultures. This is an important branch of learning, but it is a specialty which should not be misbranded as the complete embodiment of an art curriculum.

2. A professional interest in techniques of artistic production. This type of curriculum usually is found in art schools and is carried over into studio work in the college. Its proper place in the liberal arts college is limited to late specialization in certain fields of interest. Its universal application is valueless and as a point of departure it is paralyzing.

3. A formularized presentation of "principles" of art appreciation. This is an attempt to make rational and logical for pedagogical ease and communicability material which cannot appropriately be reduced to rational structure. Its value lies in the realization of the proper point of emphasis as an introduction to art, but its failure to understand the nature of its subject matter is

grievous. It is particularly misleading because it creates false values with a convincing facility.

4. The type of curriculum which is unbalanced or lacks correlation, wherein you have competent teaching of the history of art without teaching of the appreciation of art, or vice versa, or where the two are taught without correlation between themselves and without correlation to whatever studio courses are offered.

As a commentary on the general status of the art curriculum, we find an intelligent critic writing a survey of college teaching in the Fine Arts in 1925 able to mention only one name, in his experience, that could be linked with an appropriate approach to the *appreciation* of art.

Our general aim is to make the student's experience in the field of art intelligible, useful, and fecund. By carefully defining the aspects of art as we understand them, we shall be illuminating the objectives of our procedure, after which we can discuss our curriculum as a means of approaching these objectives.

The appreciation of art in its aesthetic significance is concerned with the fact that art is seeing and feeling. The artist's vocabulary is determined by his senses; in the plastic arts, with which we are particularly concerned, the senses of vision and touch. The aesthetic value of a work of art depends upon its significance as something to be seen, or as the Greek meaning suggests, its "fitness to be perceived." This is not something which the intellect can discover, but something which depends on the keenness and attunement of the senses, and their divorce from their usual associations as instruments or avenues by which the intellect is reached and provided with material for interpretation. A fact *is*. A truth is something about the fact, a valid interpretation of it. A work of art *is*, like a fact, and is to be perceived for what it is as a particular plastic experience. To be aesthetically perceived it must not be considered for the interpretations its material suggests to the intellect, but it must be perceived for the delight and satisfaction of the sense or senses involved. Visual experience, by definition, is experience received by the sense of vision. What makes one visual experience more significant than others, and what is distinctive in that type of visual experience

which we associate with the plastic arts? It is that each valid monument of the plastic arts is *designed* for the delight in seeing. Its organization and integration have been felt as something eminently adapted merely to being seen. It is this integral quality, this co-ordination of elements with respect to the sense or senses involved which constitutes the aesthetic factor. This differentiates the sensuous delight in seeing or feeling a piece of lovely blue velvet and in seeing a work of art. It is this which we can properly call, in the broadest sense of the term, *design*. Design is the complete permeation of the sensuous elements in the situation with the unique realization or achievement of complete mutual sympathy and integral co-ordination with respect to the perceiving sense or senses. Its effective basis, therefore, is essentially physiological and, consequently, essentially universal.

Design, according to our definition, amounts to the control of the plastic factors involved in a work of art so that they shall present an integral record of the creative purpose, in so far as the perceiving senses are addressed. Control is significant in other instances of design, like the design of an engine or the design of a harmonious society. In those instances, however, the materials *existing* must be dealt with and the control or design is conditioned by the circumstances given. Design, in the so-called fine arts, while it is divorced from the situations of mechanical or social experience of life, is unique in its ability to exercise complete control of its materials, determined only by the senses involved, a limitation defined by the very nature of the human organism.

This observation would lead me to suggest that the realization of aesthetic experience in art, the goal of art appreciation, is generally the most significant aspect of the program which we must define.

Design as control in the realm of the sensuous translates the aesthetic value of art into the social realm. A work of art is significant because it represents an entity that is an enrichment of experience, just as a social institution is significant when it serves as an effective instrument in making human experience more complete and significant. As social beings we shape and are shaped by our social institutions, such as education; as sentient beings we

are enriched by the experience of sensuous entities which we create and in whose creation we participate by appreciation. In both illustrations, experience gains by becoming ordered and meaningful rather than chaotic and baffling.

The aesthetic factor is concerned with the felt qualities of the plastic achievement. Its values are final and incapable of definition or intellectual demonstration. I am prompted to mention the story of the adventurer whose ambition was to reach the summit of Mount Everest. A friend who felt no particular sympathy for his desire asked him why he wanted to get to the top of that mountain, and he replied that that was a question which one could not answer to anyone who would ask it. I believe the same thing is true of the artist. One cannot ask why he put this shape here or that line there, or why he painted the picture in the fashion in which he did. It is something which he felt and which cannot be reduced to a logical explanation.

To have done with art when we have completed our concern with the appreciation of the aesthetic factor would be almost as unreasonable as to neglect that all-important phase. Other perspectives of the subject are possible and are significant. As far as I see, they are all linked with the intellect and immediately involve a distinction among particular individuals resulting from the variability of the "apperceptive mass."

These other considerations have to do with artistic techniques, with their origin and development, with art as a basis of psychological expression and as a cultural index, and with history of these factors; in a word, we might say the *idiom* of art. I may be giving to this word a larger connotation than is usual, so I shall briefly attempt to state its meaning in my usage. In one sense art is a language, as valid as any other. A language involves knowledge of vocabulary, syntax, style, meanings, and such considerations. The word idiom is used to indicate the sum of all these factors as they apply to the language of art analogously to their application in a verbal language. When John La Farge said that "art begins where language leaves off" he was obviously referring to the aesthetic factor rather than to the idea of idiom as we have defined it. In this light, I think, we can readily agree with him.

Since language is only intelligible with respect to the culture and environment out of which it grows and takes its meanings, it is only natural that the consideration of artistic idiom like the consideration of language must be followed on a historical basis. It might be observed that we understand the language of each other because of common cultural heritage, or, to put it simply, the common factors in our apperceptive mass. Going into other ages the same words have different meanings. A dictionary on historical principles is the only dictionary valid for extensive use.

This observation holds true, I believe, in the arts. We can only *understand* the arts in terms of a historical knowledge and, in the converse, the arts are a great aid in the humanizing of history just as philology, with reference to language, is. Here is a study which is beneficial in proportion to what we can bring to it. The history of art is a clarifying mirror of the history of civilization, just as the history of any subject should be. It is more than the meaningless cataloguing of facts, names, and dates which too often it is allowed to become. But its research must always be devoted to the pursuit of facts in order that its interpretations be valid. (Design in the plastic arts is concerned with the control of virtually unlimitable factors. Design in scholarship—or its aesthetic basis if we may use the term—is concerned with the control and ordering of objectively derived facts whose nature is essential and must always be a determinant of the product evolved. Criticism can be beautiful, without being true, but in such a case it is obviously useless, except for its beauty. Much philosophy, religion, and criticism undoubtedly live on essentially this impractical basis.)

Our third and last consideration is of the ideals and objectives of laboratory or studio courses in the arts. This is an important branch of our study which is too likely to be overlooked in the academic field. This part of the curriculum has two essential functions, each corollary to the two broad divisions or phases of art outlined in the foregoing. With regard to the aesthetic factor in the plastic arts, studio courses are perhaps the greatest aid in developing a feeling for design as defined in the preceding. The appreciation of art is, essentially, learning to see, and it would seem that no training is as effective as that seeing which must have

added intensity in order that vision be carried into objective record.

This type of practice has no essential relation with talents or skills. It is open, in the plastic arts, to all of us who can see. Recent developments in art education among children should bear added evidence at this point.

The other aspect of studio courses relates itself to the artistic idiom and to history. The artist's activity is manifested in terms of processes and techniques, the knowledge of which is essential to a study of the idiom, however irrelevant it may be in a purely aesthetic appreciation. The best way to understand these processes and techniques is by investigating them, and this investigation can obviously be enhanced by actual contact with materials, by experimentation, and by the other practices involved in laboratory courses of this nature.

Having defined our ideals and objectives, we can proceed to an explanation of the curriculum which has been designed to achieve them. It might be observed that the ideals and objectives are considered more important than these attempts at curriculum-building which have been formulated in the light of them. These efforts are tentative and open to criticism and revision. Methods are subordinated to objectives and can be varied in achieving the same end. Differing circumstances of background, environment, preparation, etc., have to be borne in mind in dealing with curriculum and methods. Ideals have a more universal status.

The Department of Art has devised five related junior-college courses, essential to a major sequence and recommended in whole or in certain combinations to all who wish brief, enriching contact with the field as part of their general education. The five courses are:

Art 151. Approach to Art Appreciation
Art 152. Survey of Art—Ancient and Medieval
Art 153. Survey of Art—Renaissance and Modern
Art 101. Introduction to Pictorial and Plastic Expression, I
Art 102. Introduction to Pictorial and Plastic Expression, II

Art 151 and 101 are given as parallel courses in the Autumn Quarter. The primary aim of each is to develop aesthetic appre-

ciation of the plastic arts and to present the principles as herein outlined which justify this procedure. Both might be called courses in learning to see. In Art 151 the method employed includes lectures, demonstrations, discussions, and visits to the museum of art to establish contact with originals, the latter being essential to the full realization of the aims of the course. Lectures are illustrated with lantern slides. By comparison and analysis, the instructor seeks to develop that keenness and attunement of the visual sense which will enable the student to feel the aesthetic significance of works of art. An important part of the work is done outside of the class. This is not so much in the nature of reading and study, which is limited, but in the accumulation of materials and observations on visual and aesthetic experiences which is submitted in organized form for inspection, comment, and discussion between instructor and student.

In Art 101 the problem of aesthetic experience is approached through creative activity. The nature of the problem naturally precludes too definite a routine. The projects are such that the student will develop a feeling for the organization of lines, patterns, masses, colors, etc., in terms of plastic satisfaction. Representation is subordinate. Its meaning is considered to lie in the fact that our visual experience consists in the seeing of incidentally identifiable objects, and in the translation of that experience the aspects of the forms involved which make them identifiable may be retained. Much can be gained from the study of objects as models, but the incidental representation involved is not emphasized for itself alone. At the beginning, most of the problems are of an abstract nature. This may or may not be the proper point of departure.

Art 152 and 153, following 151, in the Winter and Spring Quarters, respectively, deal with the history of art. They aim to present in direct and vivid fashion the unfolding flower of civilization as embodied in the development of all the arts. They seek to penetrate the circumstances and developments of culture by revealing its unself-conscious language, the language of art. In this absence of self-consciousness which art displays lies its greatest validity in the eyes of the historian. The valid interpretation of the

facts, in the light of history and culture, as well as objective knowledge of the facts themselves, is always developed. Pages might be devoted to a discourse on the rich store of material which these courses deal with and to the historical insight which its effective handling yields. Professor C. R. Morey, of Princeton, has written a concise and cogent statement in this direction, "The Value of Art as an Academic Subject," in Volume I, Number 3, March 15, 1929, of *Parnassus,* an organ of the College Art Association.

Art 102 is presented in the Spring Quarter to continue where Art 101 left off. Its aim and procedure is the same, and it seeks to suit its projects to the development of individual and class progress. The only tangible distinction that might be mentioned is that it seeks to develop seeing in terms of problems that become more concrete. The directing idea is that too early an introduction of the problems in which representation is involved in an achievement of plastic design may create an undue emphasis in the student's mind upon the accuracy of representation rather than feeling for plastic significance, thus leading into a comparatively sterile pursuit.

No mention is made here of the second type of laboratory course outlined in the foregoing, since it is felt that the more specialized nature of such a study does not belong to the junior-college curriculum, which is the exclusive subject of this report.

One other course, not administered by the Department of Art, must be mentioned. It is General Survey 106, "The Meaning and Value of the Arts." It is a co-operative enterprise in which members of the University faculties and outsiders contribute to a program covering the plastic arts (including painting, sculpture, architecture, and the graphic arts in the restricted sense), music, literature, and drama. An account of this course by its eminent director, Professor Robert Morss Lovett, is contained in a report entitled "Orientation and Survey Courses at the University of Chicago," submitted May 1, 1928, by C. S. Boucher, Dean of the Colleges of Arts, Literature, and Science.

The co-operative nature of the course, necessarily introduces many points of view and differing approaches to the subject. This might seem hazardous in dealing with junior-college students. Its

counteragent lies in the frequent opportunity provided for group discussion and personal and group conferences with the director of the course and the participating instructors. It is a stimulating procedure and one which should tend to develop in the student a considerable intellectual independence.

The presentation of kindred subjects in terms of different ideals and points of view forces the student who is awake and alive to thought and speculation about the whole subject. This is a value implicit in the conduct of all of our courses, but here particularly favored by the nature of the procedure. It is fortunate, also, that this situation occurs where a wide range of subject matter is involved, so that the course may truly serve as a stimulus in many fields toward a future activity either in the nature of specialized emphasis or the independent development of the individual. In either instance, the presentation of various points of view is a starting point which should lead to liberal attitudes and a progressive understanding rather than to a conservative complacence.

The original purpose and setting of this course identified it with an attempt to organize part of the junior-college curriculum into survey courses dealing with science, society, thought, and the arts. It sought to provide a stimulating acquaintance with the arts to the junior-college student who was interested in acquainting himself generally with various fields of learning. It continues to serve this purpose and frequently serves as the one course dealing with the arts elected in an undergraduate program. In view of this fact, it makes a special attempt to interest the student in all of the local resources of the art-lover so that the student will find himself oriented not only with regard to a field of human experience but also with regard to the cultural springs of the environment in which he lives. Weekly written reports inform the director of the course of the "collateral activities" in which the student has engaged; together with his reactions and comments.

The course is rich and fruitful. Obviously, it is expensive. Its chronological position, with regard to students *majoring* in art, is not determined. It should be of great value whether taken at the beginning, as a general introduction, or at the end, as a summary or

retrospect, and should serve as a further stimulus to independent inquiry and development.

This discussion of art in the junior-college curriculum has attempted to go beyond the traditional solutions of the problems involved. Certain solutions must remain hypothetical, pending accumulation of further data and evidence. Certain new problems are raised in connection with difficulties of administration. The nature of the subject would seem naturally to differentiate its procedure with regard to grades, credits, examinations, and testing of achievement. These matters are being generally re-examined in all fields, and it would seem that a liberal point of view could deal intelligently with them without being arbitrary. The measurement of achievement is of great importance and must be developed in these lines or surmounted in some fashion that will render curricular experimentation effective.

CHAPTER XIX

THE JUNIOR-COLLEGE SURVEY COURSE IN SOCIOLOGY AND ANTHROPOLOGY

ELLSWORTH FARIS

The word "orientation" as used in connection with a college course is a metaphor from the field of the surveyor or the navigator. It belongs in the class of dead metaphors, since the imagery once called up by the word no longer accompanies its use. To be oriented is to be set right with reference to a system of objects or relations which are imperfectly understood. If the surveyor can find the orient, the east, it is mere routine to proceed with the location of the other points of the compass. When the student encounters the vast complexity of modern university organization and the confusing variety of the competitors for his attention and participation, the need for some clew to the labyrinth, for some fixed points to guide his journey, is now so widely recognized that we may assume the agreement of all.

But how to orient? Here we encounter two conflicting notions, not always explicitly stated but unwittingly assumed. One way is to give the student facts and conclusions, to indoctrinate him in a point of view with reference to current controversies, to make him "believe in" evolution or some other theological or philosophical creed. Orientation thus means, to the advocates of this method, instruction, presentation of demonstrated truths, conversion to the creed of the dominant sect or academicians. In sharp opposition to this view is the conception of orientation as education, as the stimulation of intellectual activity, with facts as secondary to problems, and with the emphasis on activity as the essence of science.

The orientation course given under the title of "A Survey of Sociology and Anthropology" was offered in the spring of 1928 and repeated in the spring of 1929. It has been announced for the Spring Quarter of 1930. The course was planned in response to a

request from Ernest H. Wilkins, Dean of the Colleges of Arts, Literature, and Science, and carried out under circumstances which were not exactly those he most desired. The Dean had carried on conferences with the management of the orientation course entitled "The Nature of the World and of Man," which resulted in an invitation from that group to the social science departments to provide a course for the second half of the Freshman year so that orientation in social science might receive as much time as in natural science. This offer was considered by the social science departments, but was not accepted by them. However, an orientation course was planned in history and another in economics, and the Department of Sociology and Anthropology was invited to offer a similar course in its field.

Several of the members of our group had had experience in lecturing in the course called "The Nature of the World and of Man" and in two other orientation courses, and in planning our work we were naturally influenced by what had been done in those courses. As a result of conferences, a decision was reached to attempt a course which was frankly experimental, involving a somewhat radical departure in principle and in method from the orientation courses referred to.

One difficulty in an orientation course is to make clear to the students the conception of science as a system of working hypotheses and a method of investigating problems. As often presented, the orientation courses present rather a brief and authoritative system of conclusions which, owing to the brevity of time, tend to assume a dogmatic character. The result of this type of presentation is sometimes the acceptance on authority of what science teaches as the student understands it, although in not a few cases it happens that a student reacts negatively to the unsupported authoritative assertion and is quite willing to argue and contradict the statements with which he cannot agree. It seemed undesirable to try to give a brief condensation of the *Encyclopaedia Britannica* or even the *Encyclopedia of the Social Sciences*. Moreover, it was obvious that if the course was to have significance, it must not attempt to reproduce the standard and carefully organized courses which are designated as "Introductions" to sociology and

anthropology, respectively. It seemed advisable to let this work be done where it could be done adequately and to seek for another principle of organizing the course.

It was decided that the course should be participated in by the nine members of the staff so that the students should get a first-hand acquaintance with each member of the Department and some impression of the personality of those who are teaching in this field. This acquaintance was believed to be a very desirable objective of the course and was so appreciated by the students. Many of them reported that this opportunity was one of the reasons why they chose to enroll.

It was agreed that no attempt would be made in the lectures to cover the whole field, but that each lecturer would select some major project of scientific research with which he was thoroughly familiar, preferably something which he himself had done, and present this one project in detail in three lectures, with a fourth hour devoted to questions from the students designed to bring out any points in which they expressed an interest. The fifth day of the week was devoted to the meeting of conference sections in which groups of twenty-five were able to meet separately, answering questions and going into details, which was impossible in the larger group.

The enrolment of the course in 1929 was 160. While originally planned for Freshmen, a number of upper-class students enrolled owing to an oversight in the announcement which did not state that they were ineligible. After conference it was decided to allow the latter to remain if they wished. None withdrew. It is interesting to state that the inclusion of these senior-college students was thought to be advantageous. The association of the Freshmen with the more mature students was apparently of advantage to all concerned. The present practice of sectioning students so that each group shall be homogeneous in age and ability appears to be a superstition which will disappear when the older lockstep conception of education is abandoned. The mature and immature alike gain from being associated in a single group.

Four books were placed in the rental library, and each student was required to read carefully and report fully on them. The books

were Marett, *Anthropology;* Malinowski, *Argonauts of the Western Pacific;* Thrasher, *The Gang;* Park and Miller, *Old World Traits Transplanted.* This list of books was defective in one respect: it would have been highly desirable had the students been provided with a brief book in sociology comparable to that by Marett in anthropology, but no satisfactory book could be found. Recourse was had, however, to a long list of introductory textbooks which the students were asked to examine as they pleased, but which they were not required to report on in detail. Three of the required books were descriptions of specific investigations, one in ethnology, one in the field of immigration and culture contacts, and one in the study of collective psychology and juvenile delinquency.

The subject of the lectures which described the specific projects was admittedly fortuitous, and the specific subjects were regarded as of minor importance. There were several topics presented in 1929 which were not given in 1928, and vice versa. The 1929 lectures included the following topics: physical anthropology, archaeology, ethnology, linguistics, population, the parole of prisoners, the study of reform, the effect of moving pictures on personality of children, and the psychology of punishment.

It is important to repeat that these were not general discussions of the nature of specific fields, but definite accounts of actual investigation with a statement of the way the problem arose, the manner of its formulation, the methods used in investigating it, the hypotheses entertained, the testing of these notions, the resulting conclusions, and the remaining problems. Emphasis was given throughout to social science as an activity. The stress was on what the people in this field are doing, and the investigations reported were given merely as samples, with the insistence that many other projects could have been described for which there was no time.

An admitted weakness of the course was due to the unrelated nature of the separate problems presented and the resulting difficulty on the part of the student in organizing the course into a unity. In order to meet this difficulty, two weeks were given to the task of unifying and organizing the whole course. The first week gave time for a brief mention of the four fields into which an-

thropology is divided at the University of Chicago, and the six fields into which the sociology courses fall. An unexpected appreciation from the students was obtained when during this week the entire list of courses in the catalogue was read, and each one briefly characterized, showing its relation to the separate division and to the science as a whole and to other sciences. In the concluding week of the quarter a review was attempted in which these fields were mentioned again and the specific relation of each lecture in the total scheme was pointed out. Frequent mention was also made of important researches now in progress which could not be presented. Furthermore, an effort was made to point out the place of the books which were assigned and to relate each one to a unified and organized conception of the sciences as a whole.

The students were provided with a series of outlines totaling in all about forty mimeographed pages which contained a brief program of the course, an outline of each lecturer's project, a summary of the course. In addition the best book report on each of the four books was duplicated and given to all the members of the class. There were four tests or one-hour examinations during the quarter in which questions were set on the lectures and on the readings. Each of the four books was reported on in writing by each student. A final two-hour examination over the whole course was provided at the end of the quarter. Next year will, it is hoped, see the publication of a book that will embody the views of the lecturers.

The difficulties which appeared in carrying out the scheme were chiefly two in number. The first was the confusion in the minds of the students when confronted with the separate and unrelated projects. The effort to meet this difficulty has already been mentioned, and it seems clear that with skilful introduction, comment, and conference this can be satisfactorily taken care of. If orientation is thought of as the process of getting one's bearings and finding out somewhat accurately about the general nature of a field, it seems inevitable that some aspects will receive more attention than others. However, it does not seem an impossible task to show that the study of parole, for example, is a specific problem in the whole division of criminology and criminal sociology, which

in its turn belongs in the larger category of social pathology. The difficulty, therefore, while very real, was partly met and overcome, it is believed. The opinion is justified that it can be more carefully taken care of when next the course is given.

The second difficulty arose from the incomplete acceptance of, or the inadequate comprehension of, the notions presented on the part of all who participated in the course. Some of the lecturers gave more of their time to general considerations, although there was always some mention of a concrete problem. This difficulty is obviously one which conference and discussion can overcome.

The philosophy underlying the course is not a matter on which all will agree. There are those who strongly contend that Freshmen students should not be confused by having problems presented to them. To such persons orientation means indoctrination. In one course in scientific orientation the effort was made to cause the student to believe in evolution and the arguments for this faith were presented with skill and persistence. Serious objections were raised against any information being presented to the students which would acquaint them with the fact that evolution is not a conception which applies to society and social organization. The grounds of this objection are well known and can be objectively stated. The student is held to be immature and incapable of weighing evidence carefully, and it is held that he is only confused and upset by having problems presented to him until he has first learned carefully what his wiser teachers know.

In this course the assumption was the opposite. It was assumed that college students are relatively mature, that they have been thinking on many subjects for many years, and that they are capable of weighing evidence and doing sound reasoning if they are given facts and problems to work with. It was further assumed that thinking is an activity which takes place only when problems are presented and that statements of results without evidence, or of conclusions which are merely advocated and buttressed by so-called arguments, are not necessary or even advisable if it is desired to stimulate the minds of students. The purpose of the course and the plan of work were therefore influenced by the conviction that the best way to stimulate people to think and to reason is to

present them with real problems which are at present unsolved, to show them how the men work who are trying to solve them, and to present the evidence on which conclusions are based in such a way that the student will have a perfect right to manipulate the data for himself and to draw any conclusions that they warrant.

The results of the experiment should be evaluated by some disinterested person. Unfortunately, there are none other than those who gave the courses who are sufficiently familiar with its content and results to pass intelligent judgment. It does not seem improper, however, to say here that those who took part in the course are firm in their conviction that it should be given again, trying to strengthen its weak points and to make it fulfil more adequately the orienting function for which it was planned.

In order to secure some idea of how the course was received, the students were asked not to evaluate it but to indicate what topics in it were of most interest to them. Many of the answers simply indicated the topics which they found of most interest, but more than a hundred went on to speak of what the course as a whole had done for them. There is always some question as to the objective nature of such statements, but most teachers know that students tend to be rather frank when questioned about the courses which they take and many of us have received very honest criticisms of our work. A few quotations from these statements are given here for what they are worth. The evidence indicates that the central aim of the course was achieved, and that the students did acquire a conception of social science as an activity with a body of knowledge, with vigorous emphasis upon unsolved problems and valid methods of investigation.

One student wrote:

> The most important thing this course has done for me is to organize my ideas about sociology and anthropology. I now have a good idea of what they do and have also learned something about how they do it. It was a good idea not to present facts only but in addition to let us see how they arrived at conclusions. I have learned how important is cooperation between the different scientists. One scientist cannot do anything without the help of the others. For instance, the physical anthropologist has to know anatomy. Another thing I found out is that scientists are very willing to learn, as soon as they see that a

new and better hypothesis has been worked out they discard the old one. I think that is one reason for the great achievements of science. Besides, I got to know the different lecturers, the way they teach, and what courses they give.

Another wrote:

Besides gleaning many facts concerning the scope of the studies of sociology and anthropology and getting a fairly clear idea of what it is all about I have begun to realize that in most cases the studies that are made are of real importance and that they may make a difference to me. I find that the course has broadened my reading field, and I can now add to the kind of books I read. I feel, however, that the facts I have got from the lectures and reading are of little value in comparison to the contact with men of ability which this course has made possible. With this contact it is impossible not to acquire attitudes and interests in the fields explored.

And from a third:

I think that perhaps the most significant thing I have received from this course is the realization of the practical value of the work being done in these two departments. At times the work in the University seems interesting enough but of little practical value, and even though we have an idea that it must be worth while it is all very vague. But such studies as have been described here have convinced me that science isn't just theories and lovely ideas. This knowledge is quite a comfort when outside the University circle we come in contact with those who look upon universities as being tremendously impractical and education as a bunch of nonsense.

And from one young woman:

I have learned that whenever a topic or subject is taken up such as crime, punishment, or reform, I should take an unprejudiced and objective attitude, for only by doing so can a rational solution be arrived at. One's attitude must be scientific, the person must look for facts before he can form a theory. I have also learned a significant thing, and that is that the problems in sociology and anthropology require much time and investigation. The methods employed by these men have given me a new light into what science is. They have further taught me to be patient, for studies take a long time to complete. Men have worked years on a particular study and some have spent their whole life on a given enterprise. This proves the patience of such men. I hope I too can be like them and try not to do things in a slipshod manner.

And from a young man who lives in a western state:

I have taken sociology courses in the high school and I expected to make studies of unemployment, poverty, and so forth. I was agreeably surprised, and as a result of this excursion into the "private" methods of the men who lectured, my interest in sociology and anthropology has been awakened. I feel

there is more to the field than most people believe, and that it is not a dry mass of facts but a thrilling tale of the study of social change. Whether I remember some of the facts or not is unimportant to me if I can understand better the scientific spirit of sociologists and realize the enjoyment and value of the studies which they make. Perhaps the most worth-while feature of the course was the contacts which are made with men of such high caliber. There is nothing more worth-while than to learn from such men as Mr. ——, Mr. ——, and Mr. ——. Some students no doubt desire an organized body of facts which are fool-proof, but I am more than willing to try to understand the uncertainty, the trials, and tribulations of these blazers of the trail.

And this one:

I consider this particular survey course a very valuable one to me. In the first place, I have learned the importance of problems to enrich men's knowledge. I see as never before the logical nature of the investigations of the sociologist and anthropologist. The presentation of all the phases of sociology and anthropology in an introductory manner is especially commendable as it gives the student an opportunity to choose the fields in which he may be interested and at the same time learn their relation to other fields.

A final quotation:

Perhaps the most significant results I have gained from this course are related to methods of investigation. For some time I have been interested in investigating topics of personal concern to me but I have always started with a rather definite idea of what I would like to find and I never failed to conclude with the original idea firmly proved to my satisfaction. It has been interesting to follow the methodological procedure of Drs. ——, ——, and ——, and other men who have lectured to us. At first, I must confess, my opinion was in opposition to the idea of stressing the technical side of problems. However, I see clearly now the value of the teaching of methods to Freshmen who will in the course of their future work in and out of college find the habit of scientific method very essential. Besides learning the efficacy of good method I was also impressed with the remarkable results that can be achieved. For instance, I refer to the extremely interesting study made by Burgess and his associates. The material before them was not only huge in content but inextricably confused and could be used profitably only by employing very definite systems of work. From this vague mass of information these men arrived at a concise, almost self-explanatory control chart. This is certainly impressive, at least I found it so.

I am tempted to extend these quotations, but perhaps they are sufficient. They are taken quite at random from a large number. To those of us who worked hard on the course they give gratifying evidence that college students are not only capable of thinking

when problems are presented to them but that they respond splendidly to the presentation of real scientific projects. Far from being confused by having alternatives set before them, they tend to have more respect for themselves because they are considered worthy of knowing the truth and felt to be capable of sound reasoning.

The emphasis on method involves no neglect of facts. Indeed, the facts become infinitely more important since conclusions must be based solely upon them. Sound reasoning enforces a reverence for facts. All reasoning involves content, and formal logic is mere algebra. The opposition to the dogmatic type of orientation course is not directed at the presentation of facts but at theories and convictions buttressed by arguments and presented as closed questions. Surely politics and theology have given the average student far more of that than is to be desired. In the life of a university what is most needed is a conception of men at work. The student in an orientation course should learn much, but the most important thing, the beginning and the end and the middle, is to learn not merely the truth but how truth is pursued. The awakening of curiosity, the stimulation to mental alertness, the realization of the joys of scholarship, these are more important than any doctrine. The most valuable learning the student can do is to learn how to learn.

AN ANNOTATED AND SELECTED BIBLIOGRAPHY ON THE JUNIOR-COLLEGE CURRICULUM

Compiled by L. BELLE VOEGELEIN

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Describes the curriculum of the college.

American Council on Education Committee on Standards. "Standards and Principles for Accrediting Junior Colleges," *Educational Record,* V (July, 1924), 202–4. Also in Koos, L. V., *The Junior College,* II, 660–61. Minneapolis, Minn.: University of Minnesota, 1924. (Research Publications, "Education series," No. 5.)

Includes admission requirements, graduation requirements, and standards relative to faculty, curriculums, enrolment, income, buildings, equipment, and inspection.

Andrews, Arthur. "How the Junior College Serves the Community," *National Education Association, Department of Secondary School Principals Proceedings, 1929,* pp. 340–47.

Points out that the junior college should offer in addition to the preliminary training for the university, special work particularly planned to meet the needs of the local community.

Angell, J. R. "Problems Peculiar to the Junior College," *School Review,* XXV (June, 1917), 385–97.

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Ball, Margaret. "Introducing Freshmen to Scholarship," *School and Society,* XVII (February 24, 1923), 205–8.

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Bennett, G. V. *Public Administration of Vocational Education of Junior College Grade.* Thesis (Ph.D.), University of California, 1926.

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Develops the thesis that the junior college should perform the following significant functions: (1) prepare for the professions; (2) bring college education within the reach of a wide range of people; (3) provide terminal training for vocations; (4) be the guardian of culture; (5) be the intimate home of educational research in the fields of curriculum and class instruction.

*———. "The Junior College and Its Curriculum," *American Association of Junior Colleges Proceedings, 1923,* pp. 49–53.

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Jones, E. S. "Value of a College General-Science Course," *School and Society,* XXVII (May 19, 1928), 607–8.

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KELLY, AMY. "Orientation Courses," *Progressive Education,* IV (October, 1927), 272–77.

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KELLY, R. L. "Remaking the College Curriculum," in his *The Effective College,* pp. 52–68. New York: Association of American Colleges, 1928.

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A brief statement of the purposes and program of the college.

*KOOS, L. V. "Co-ordinating the Work of the Senior High School and Junior College," *National Association of Secondary-School Principals Proceedings, 1924,* pp. 94–106.

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Of the sixty-five junior colleges visited more provision was found for two years of work acceptable to higher institutions—liberal arts and preprofessional curriculums—than for the completion of the education of those not going on or for occupational training to be completed during junior-college years.

Koos, L. V., and Weersing, F. J. "Curriculum: The Junior College Offering," in their *Secondary Education in California,* pp. 87–93. Sacramento, Calif.: State Department of Education, 1929.

Shows that junior colleges in California were providing two types of courses, one designated for recommended students, the other for non-recommended students.

Lange, A. F. "The Junior College as an Integral Part of the Public School System," *School Review,* XXV (September, 1917), 465–79.

Believes that the "junior college will function adequately only if its first concern is with those who will go no farther, if it meets local needs efficiently, if it enables many to round out their general education, if it turns an increasing number into vocations for which training has not hitherto been afforded by our school system."

———. "The Junior College: What Manner of Child Shall This Be?" *School and Society,* VII (February 23, 1918), 211–16.

Provides basic principles and policies which must be considered in the formulation of curriculums.

———. "A Junior College Department of Civic Education," *School and Society,* II (September 25, 1915), 442–48.

Sketches what a department of civic education might be and should be.

Leonard, R. J. "The Contributions of a Study of Occupational Levels to Junior College Policy," *American Association of Junior Colleges Proceedings, 1925,* pp. 94–101.

Points out that middle-level occupations, such as pharmacy, optometry, nursing, public service occupations, certain commercial, engineering, and agri-

cultural occupations, are all potentially open to junior colleges. "They represent permanent and distinctive fields for which junior colleges alone can best train prospective workers."

*Leonard, R. J. "Professional Education in Junior Colleges," *Teachers College Record,* XXVI (May, 1925), 724–33.

Shows that the junior college should devote itself especially to the preparation of students for "middle-level occupations."

Lovett, R. M. "Meiklejohn at Madison," *New Republic,* LV (July 11, 1928), 193–95.

Describes the curriculum and methods of instruction used in the Experimental College at the University of Wisconsin. The college is for college Freshmen and Sophomores only.

Lyon, J. A. "A Study of the Curricula of Junior Colleges as Affecting Their Graduates Entering Four-Year Colleges," *American Association of Junior Colleges Proceedings, 1926,* pp. 28–32.

Compares the admission requirements of seventy-eight junior colleges and twenty-four universities and colleges.

McDowell, F. M. *The Junior College,* pp. 50–53. Washington, D. C.: Government Printing Office, 1919. (*U. S. Bureau of Education Bulletin* [1919], No. 35.)

Considers the subjects which are taught in twenty-eight private and nineteen public junior colleges. The traditional Freshman and Sophomore subjects rank highest in frequency.

Mangum, W. A. *Teacher Training in the Junior College.* Thesis (M.A.), Colorado State Teachers College, Greeley, 1928.

Concludes that the junior college should confine its activities to the training of elementary-school teachers; that the certification requirements of the various states can usually be met by the junior college; and that there are some evident weaknesses in its present teacher-training curriculum.

*Marshall, L. C. "Junior College Curriculum Building in Economics and Business," *American Association of Junior Colleges Proceedings, 1928,* pp. 1–21.

Recommends two types of courses for the Freshman and Sophomore years: (1) a course that deals with the economic order and enables the student to see society as a going concern; (2) a range of tool-skill and tool-knowledge courses. Appendix A contains H. G. Shields' "Preliminary Report on the Survey of Elementary Economics in the Junior Colleges of the United States."

Meiklejohn, Alexander. "Wisconsin's Experimental College," *Survey,* LVIII (June 1, 1927), 268–70, 294–95.

Formulates a few of the educational issues which are basic in the experiment to provide a more liberal education at the junior-college level.

MELCHER, GEORGE. "The Duplication of Courses in Junior Colleges and High Schools," *National Education Association, Department of Secondary-School Principals Proceedings, 1929,* pp. 359–76.

From a study of available data, the author concludes that the last two years of the senior high school and the first two years of college can be reorganized, duplications and overlappings eliminated, and the work accomplished in a satisfactory manner in three years.

*MISSOURI, UNIVERSITY OF, COMMITTEE ON ACCREDITED SCHOOLS AND COLLEGES. *Circular of Information to Accredited Junior Colleges.* Rev. ed. Columbia, Mo.: University of Missouri, 1926. Pp. 134. (*Bulletin,* Vol. XXVII, No. 37, "Education Series" [1926], No. 21.)

Contents: "Conditions for the Accrediting of Junior Colleges"; "Suggestions Regarding Records and the Equipment for Registrars"; "Outlines of Approved Subjects"; "Suggestions for the Equipment and Upkeep of Laboratories"; "Suggestions for the Equipment of Libraries."

NEWMAN, H. H. "The Nature of the World and of Man," *American Association of Junior Colleges Proceedings, 1928,* pp. 21–23.

Presents the purpose, content, instructional and student personnel, methods of instruction, and collateral reading of this Freshman survey course given at the University of Chicago.

NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS COMMISSION ON INSTITUTIONS OF HIGHER EDUCATION. "Standards of Accredited Institutions of Higher Education," *North Central Association Quarterly,* IV (June, 1929), 54–59.

Describes a standard junior college as "an institution of higher education with a curriculum covering two years of collegiate work (at least sixty semester hours, or the equivalent in year, term, or quarter credits), which is based upon and continues or supplements the work of secondary instruction as given in any accredited four-year school."

OSBURN, W. J. *Overlappings and Omissions in Our Courses of Study.* Bloomington, Ill.: Public School Publishing Company, 1928. Pp. 167.

Shows that there is substantial duplication in materials in English composition, United States history, and physics as presented in elementary, high-school, and college textbooks.

PATERSON, D. G. "Evaluation of the Orientation Course at Minnesota," *Educational Record,* VIII (April, 1927), 99–106.

Describes a survey course which covers the fields of the natural and social sciences. Presents the students' reactions.

*PATTY, W. W. "Junior College Curricula," in Foster, I. O., and Others, *Some Phases of the Junior College Movement,* pp. 79–124. Bloomington, Ind.: School of Education, Indiana University, 1927. (*Bulletin,* Vol. IV, No. 1.)

Reports a comparative study of lower-division requirements as prescribed

by universities. The distributions of occupations in one large and one small Indiana community were investigated in order to secure evidence concerning needs for semiprofessional training courses.

PAUL, A. G., AND BLISS, H. H. "Co-operative Part-Time Work in the Junior College," in Proctor, W. M., ed., *The Junior College, Its Organization and Administration,* pp. 141–54. Stanford University, Calif.: Stanford University Press, 1927.

Describes in detail the co-operative plan of education as inaugurated and carried on at Riverside Junior College for five years.

PEARSE, C. G. *College Courses in Normal Schools.* Madison, Wis.: Committee for the Preservation of the Two-Year College Courses and the Fine Arts Course in the Normal School, 1920. Pp. 15.

Pleads that liberal arts courses as well as teacher-training courses should continue to be offered in normal schools.

PITTSBURGH, UNIVERSITY OF, DIVISION OF RESEARCH IN HIGHER EDUCATION. *University of Pittsburgh and Its Junior Colleges.* Pittsburgh, Pa.: University of Pittsburgh, 1929. Pp. 94. (*Bulletin,* Vol. XXV, No. 9.)

In addition to other valuable data on the Johnstown, Uniontown, and Erie, Pennsylvania, junior-college centers, describes the regular Freshman courses as well as the late afternoon, evening, and Saturday courses.

*PRESCOTT, H. W. "The Junior College from the Standpoint of the University," *American Association of Junior Colleges Proceedings, 1926,* pp. 69–75.

After considering the aims of secondary education—junior high school through junior college—and the subjects of the curriculum and their content, the author concludes that from the university point of view, the present junior college will ultimately make a tremendous mistake if it regards itself as simply an attempt to duplicate the first two years of the present college course.

PROCTOR, W. M. "The Junior College in California," *School Review,* XXXI (May, 1923), 363–75.

One item considered in this survey of twenty-seven junior colleges was the courses of study offered. They gave evidence of fulfilling the minimum requirements of the universities and of meriting hour-for-hour credit when students transferred.

RAVI-BOOTH, VINCENT. "A New College for Women," *Progressive Education,* II (July, 1925), 138–45.

Describes six orientation courses which are to be required of all students in Bennington College.

REEVES, F. W. "Relation of the Independent Junior College to the University and the Evolution of the Weak Four-Year College into a Strong Junior College," *National Education Association, Department of Secondary-School Principals Proceedings, 1929,* pp. 318–28.

Reports the results of a questionnaire study among 203 institutions to find out how the universities influence curriculums. Desirable and undesirable influences are pointed out.

RICCIARDI, NICHOLAS. "The Need for Terminal Courses in the Junior College," *California Quarterly of Secondary Education,* III (January, 1928), 145–54.

Points out that vocational counseling is essential and considers the principles underlying the construction of terminal courses as well as the criteria for and the characteristics of such courses.

RICCIARDI, NICHOLAS, AND OTHERS. "Terminal Courses in the Junior Colleges in California," *American Association of Junior Colleges Proceedings, 1928,* pp. 52–61.

Gives a general description of terminal courses, together with some details of the courses given in the junior colleges at Riverside, Sacramento, and Santa Ana.

*SEASHORE, C. E. "Education for Democracy and the Junior College," *School and Society,* XXV (April 23, 1927), 469–78.

Suggests two types of curriculums: (1) arts and sciences embracing (*a*) the academic, offering preparation for senior and graduate study, (*b*) junior academic, offering the same courses but as finishing courses, and (*c*) the preprofessional courses; and (2) technological or semivocational courses.

SHIELDS, H. J. *Preliminary Report on the Survey of Elementary Economics in the Junior Colleges of the United States.* Chicago: School of Commerce and Administration, University of Chicago, 1927. (Mimeographed report.)

The purpose of this study was to ascertain the status of elementary economics. Out of 107 schools reporting, 59 offered economics and 48 did not.

SMITH, PRESERVED. "Unity of Knowledge and the Curriculum," *Educational Review,* XLV (April, 1913), 339–44.

Pleads that the college Freshman at the outset of his course should see the whole scheme of things in true proportion by taking an introductory course.

*STOWE, A. M. "Junior-College Aims and Curriculums," *School Review,* XXXIV (September, 1926), 506–9.

Maintains that since the junior college is to be the capstone of secondary education, it will need to include in its curriculum such studies as are needed in order to achieve the civic as well as the social, cultural, and preprofessional aims of our public-school system.

———. *Modernizing the College.* New York: Alfred A. Knopf, 1926. Pp. 126.

A former president of the University of the City of Toledo tells of a three-year experiment in introducing a humanized junior-college curriculum in an urban institution.

STONE, A. M. "Report of a Survey of the Junior Colleges of Detroit and Grand Rapids, Michigan, and of Joliet, Illinois," *American Association of Junior Colleges Proceedings, 1921,* pp. 65–71.

Points out that the curriculums offered in these colleges were of three kinds: (1) vocational courses planned to fit directly for a vocation; (2) foundation courses planned to articulate with advanced senior-college courses; and (3) complete or cultural courses designed to develop knowledge and interest in the humanly important phases of the subjects which they treated.

TAYLOR, W. S. "The Junior College Curriculum," *Kentucky High School Quarterly,* XI (July, 1925), 25–33.

Emphasizes the importance of studying the curriculums in the light of the great social objectives of education, the vocations of the graduates of an institution, and the facilities of each institution for offering work.

THOMAS, F. W. "The Functions of the Junior College," in Proctor, W. M., ed., *The Junior College: Its Organization and Administration,* pp. 11–25. Stanford University, Calif.: Stanford University Press, 1927.

The basic functions discussed are designated as (1) the preparatory function; (2) the popularizing function; (3) the terminal function; and (4) the guidance function.

*———. "The Junior College Curriculum," in Proctor, W. M., ed., *The Junior College: Its Organization and Administration,* pp. 60–74. Stanford University, Calif.: Stanford University Press, 1927.

Develops the curriculum in terms of the functions of the junior college. Specific courses within the various curriculums are presented.

WELLEMEYER, J. F. "The Junior College as Viewed by Its Students," *School Review,* XXXIV (December, 1926), 760–67.

Reports result of questionnaire investigation among students in the eight public junior colleges of Kansas. The courses in the order of student preference were the general liberal arts, teacher training, engineering, medicine, law, and lastly fine arts.

WHITFORD, R. K. "Freshman Program for a Middle Western College of Liberal Arts," *Christian Education,* XII (January, 1929), 207–18.

Specifies the following courses for Freshmen: "The Modern World," an orientation course, four hours a week throughout the year; a foreign language; a natural science; "Critical Thinking," an orientation course, four hours a week, first semester; "Mathematical Calculations," a general course, four hours a week, second semester; and physical education.

*WHITNEY, F. L. "The Curriculum of the Junior College," in his *The Junior College in America,* pp. 92–152. Greeley, Colo.: Colorado State Teachers College, 1928. ("Education Series," No. 5.)

An analysis of the curricular offerings of 146 public and 236 private junior colleges. The entrance requirements, the arts curriculums, vocational offerings, and the completion standards are given.

———. "Present Standards for Junior Colleges," *School Review,* XXXVI (October, 1928), 593–603.

Some of the standards discussed relate to the curriculum. Reports a survey of 145 public junior colleges.

———. "Present Status of the Junior College Movement," *National Education Association, Department of Secondary-School Principals Proceedings, 1929,* pp. 328–39.

Includes a summary of the situation as it pertains to the curriculum. Vocational subjects are about 3 per cent to 5 per cent of the total offerings in public and private junior arts colleges. About two-thirds of public junior arts colleges and over 80 per cent of the private junior colleges offer no vocational courses.

*———. "Seven Years' Change in the Curriculum of the Junior College," *North Central Association Quarterly,* III (December, 1928), 432–38.

Comparisons are made with the data gathered by L. V. Koos for the year 1920–21. The article is developed under these headings: number of semester-hours offered, curriculum offerings dropped, range of subject offerings, subject emphasis, and vocational offerings in arts colleges.

WILKINS, E. H. "The Orientation of the College Student," in Hudelson, Earl, ed., *Problems of College Education,* pp. 247–60. Minneapolis, Minn.: University of Minnesota, 1928.

Explains the meaning of and describes two types of orientation courses—those which have to do with a field of knowledge and those which are concerned with the immediate problems of college life.

*WILKINS, E. H., AND OTHERS. "Initiatory Courses for Freshmen," *Bulletin of the American Association of University Professors,* VIII (October, 1922), 350–80.

Report of Committee G on courses given at Amherst College, Antioch College, Brown University, Columbia University, Dartmouth College, Johns Hopkins University, Stanford University, the University of Missouri, New Hampshire State College, the University of Pittsburgh, Princeton University, Reed College, Rutgers College, and Williams College.

"Wisconsin's Experimental College," *Progressive Education,* IV (October, 1927), 306–10.

Extracts reprinted from the *University of Wisconsin Bulletin* of June, 1927.

*WOOD, J. M. "A College Curriculum for Women," in Hudelson, Earl, ed., *Problems of College Education,* pp. 369–82. Minneapolis, Minn.: University of Minnesota, 1928.

In a description of how the curriculum is being constructed at Stephens College, the job-analysis method of determining subject matter is discussed.

*Wood, J. M. "The Four-Year Junior College," *American Association of Junior Colleges Proceedings, 1928,* pp. 44–49. Also in Hudelson, Earl, ed., *Problems of College Education,* pp. 153–63. Minneapolis, Minn.: University of Minnesota, 1928.

Presents the details of the Stephens College curriculum.

———. "Future of Whole Junior College Movement in Its Relation to Secondary Schools," *National Education Association, Department of Secondary-School Principals Proceedings, 1929,* pp. 376–84.

Describes the curriculum as it is being developed at Stephens College, through experiments.

Zook, G. F. "The Junior College," *School Review,* XXX (October, 1922), 574–83.

Two types of curriculums are advocated: (1) vocational and (2) preprofessional and preparatory to advanced and graduate work in liberal arts and sciences.

———. "The Junior College Movement," *School and Society,* XXIII (May 15, 1926), 601–5.

Recommends that along with the two-year courses which comprise the first two years of our present four-year liberal arts courses, completion courses should be offered.

———. "Junior Colleges," *Journal of Engineering Education,* XVI (December, 1925), 333–37.

Advocates that junior colleges should not only offer work equivalent to the first two years of a liberal arts college but should provide for semiprofessional education.

———. "The Municipal University and the Junior College," *American Association of Junior Colleges Proceedings, 1926,* pp. 46–50.

Advocates a variety of semiprofessional and technical courses of study which should be intended as completion courses rather than as the first two years of a four-year curriculum.

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